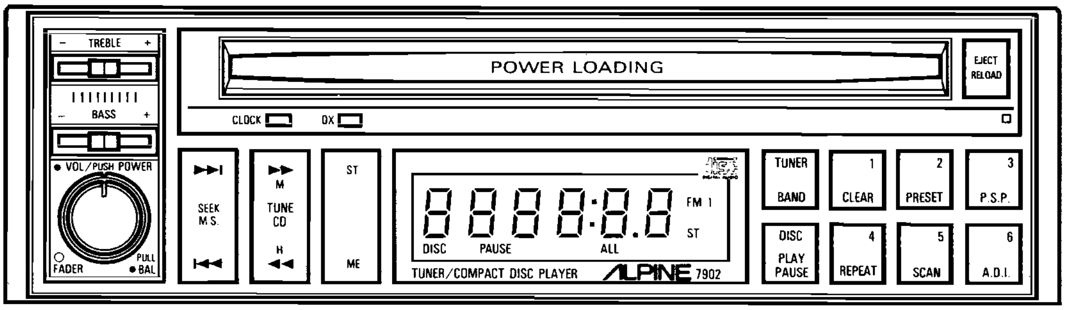
ALPINE SERVICE MANUAL

ALPI -00547

FM/AM Compact Disc Player


- TREBLE +
- BASS +
● VOL/PUSH POWER
FADER
PULL
● BAL
POWER LOADING
EJECT
RELOAD
CLOCK
DX
SEEK
M.S.
M
TUNE
CD
H
ST
ME
8888:8.8
FM 1
ST
DISC
PAUSE
ALL
TUNER/COMPACT DISC PLAYER
ALPINE 7902
TUNER
BAND
1
CLEAR
2
PRESET
3
P.S.P.
DISC
PLAY
PAUSE
4
REPEAT
5
SCAN
6
A.D.I.

547

7902/7902E/7902F

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Specifications

<CD SECTION>

System	Optical (Compact disc system)
Quantizing Bit Number	16 bit Liner system
Channels	2 Channels
Distortion (1KHz)	0.008%
Frequency Response (1KHz)	±1dB (5Hz~10KHz) (7902) ±2dB (20KHz) (7902) ±1dB (5Hz~10KHz) (7902E/7902F) ±2dB (20KHz) (7902E/7902F)
Signal to Noise Ratio	85dB
Separation	60dB (1KHz) 50dB (10KHz)
Noise Level	0.1mV
Currents (at PLAY)	1.2A
Tone Control Effect	Bass : ±10dB±3dB (100Hz) Treble : ±10dB±3dB (10KHz)

<FM SECTION>

Intermediate Frequency	10.7±0.1MHz
Frequency Range	87.9~107.9MHz (7902) 87.5~108MHz (7902E/7902F)
Usable Sensitivity (Stereo,THD 3%)	29.3dBf (98.1MHz) (7902) 34.7dBf (98MHz) (7902E/7902F)
50dB S/N Quieting Sensitivity (Mono,98.1MHz)	26.8dBf (7902)
Limiting Sensitivity (Mono,98MHz)	23.2dBf (7902E/7902F)
Signal to Noise Ratio (Stereo)	56dB (98.1MHz) (7902) 48dB (98MHz) (7902E/7902F)
Image Rejection	35dB (106.1MHz) (7902) 35dB (106MHz) (7902E/7902F)
IF Rejection	60dB (90.1MHz) (7902) 60dB (90MHz) (7902E/7902F)
Distortion (Input 1mV)	1% (98.1MHz) (7902) 1% (98MHz) (7902E/7902F)
Frequency Response	80~8500Hz (−3dB) (7902) 30Hz−3±3dB (7902E/7902F) 10KHz−16±3dB (7902E/7902F)
Stereo Separation (1.000Hz)	25dB

<AM SECTION>

Intermediate Frequency	450KHz (7902/7902E) 468KHz (7902F)
Frequency Range	530~1620KHz (7902) 531~1602KHz (7902E) 522~1611KHz (7902F)
Sensitivity (20dB,S/N)	37.2dBf (1000KHz) (7902) 39.5dBf (999KHz) (7902E/7902F)
Signal to Noise Ratio	44dB (1000KHz) (7902) 40dB (999KHz) (7902E/7902F)
Image Rejection	50dB (1400KHz) (7902) 50dB (1,404KHz) (7902E/7902F)
IF Rejection	40dB (610KHz) (7902) 40dB (603KHz) (7902E/7902F)
Distortion	1.5% (1000KHz) (7902) 1.5% (999KHz) (7902E/7902F)
Frequency Response	100Hz−2 $^{+3}_{-5}$ dB 4KHz−16±5dB

<GENERAL>

Power Supply	14V DC (10.5 V to 16V allowable)
Output Voltage/Impedance	500mV/10Kohm
Semiconductors	31 IC's,103 Transistors,8FET's 54 (7902/7902F),55 (7902E) Diodes 16 (7902/7902E),18 (7902F) Zener Diodes
Dimensions	Nose : 178 (W) ×50 (H) ×15 (D) mm Chassis : 178 (W) ×50 (H) ×155 (D) mm
Weight	1.7Kg

<COMPACT DISC>

Track Pitch	1.6 μ m
Modulation Frequency	44.1KHz
Transfer Rate	4.3218Mbit/sec
Dimensions	120×1.2mm

NOTE: Due to continuing product improvement, specifications and design are subject to change without notice.

Note :		
	7902	: North American model only
	7902E	: General European model only
	7902F	: France model only
	Others	: Common

Precautions

● PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instruction below when servicing.

WARNING !!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30 cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

> **CAUTION**
>
> Use of contorls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Laser Diode Properties

- Material : GaAlAs
- Wavelength : 780 nm
- Emission Duration : continuous
- Laser Output : max.0.35mW*

* This output is the value measured at a distance of about 1.6mm from the objective lens surface on the Optical Pick-up Block.

- Classification : Class IIIb

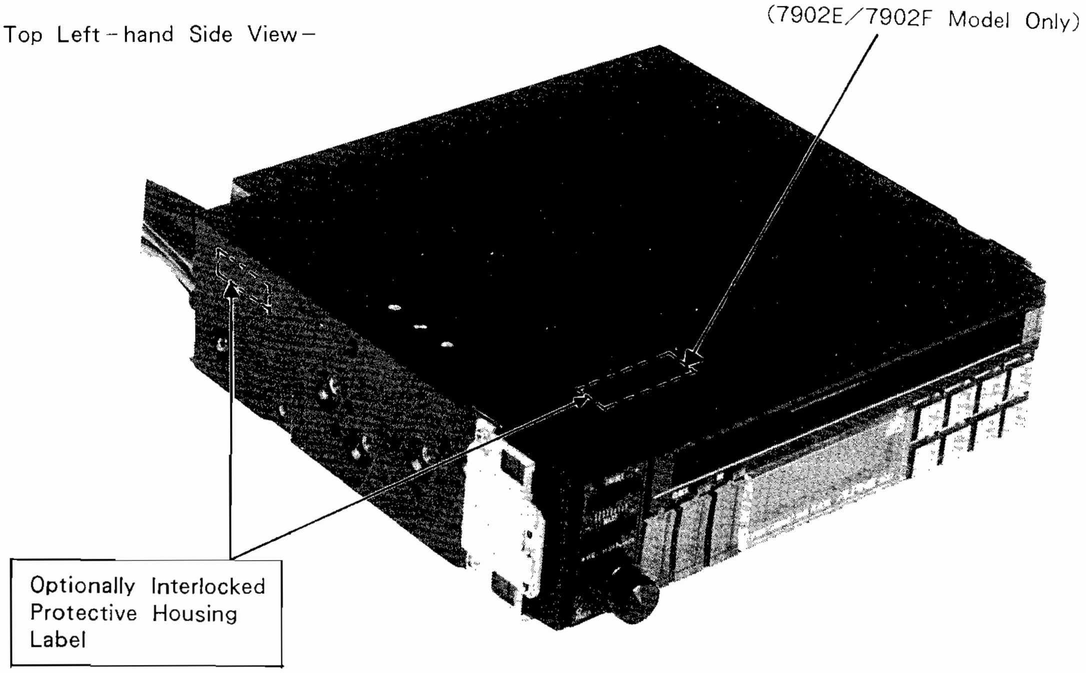
● LASER WARNING LABEL

The labels shown below are affixed.

Optionally Interlocked Protective Housing Label

> DANGER
> INVISIBLE LASER RADIATION WHEN OPEN
> AND INTERLOCK FAILED OR DEFEATED.
> AVOID DIRECT EXPOSURE TO BEAM.

-Top Left-hand Side View-



Parts Locations and Disassembly Instructions

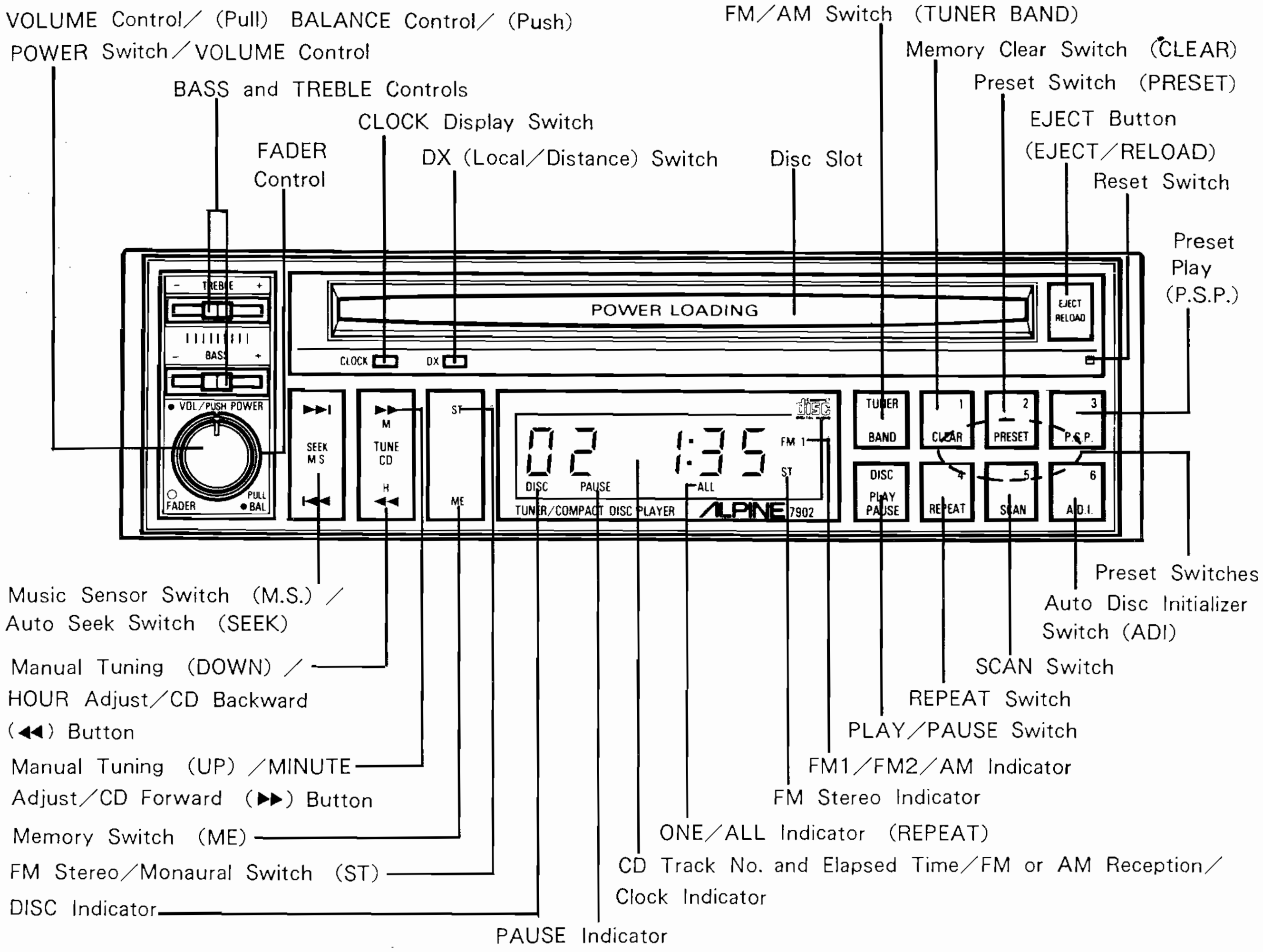

VOLUME Control／(Pull) BALANCE Control／(Push)
POWER Switch／VOLUME Control
BASS and TREBLE Controls
CLOCK Display Switch
FADER Control
DX (Local／Distance) Switch
Disc Slot
FM／AM Switch (TUNER BAND)
Memory Clear Switch (CLEAR)
Preset Switch (PRESET)
EJECT Button (EJECT／RELOAD)
Reset Switch
Preset Play (P.S.P.)
TREBLE
BASS
VOL/PUSH POWER
FADER
PULL
BAL
SEEK
M S
M
TUNE
CD
H
ST
ME
CLOCK
DX
POWER LOADING
EJECT
RELOAD
02 1:35
FM 1
ST
DISC
PAUSE
ALL
TUNER/COMPACT DISC PLAYER
ALPINE
7902
TUNER
BAND
1
CLEAR
2
PRESET
3
P.S.P.
DISC
PLAY
PAUSE
4
REPEAT
5
SCAN
6
A.D.I.
Music Sensor Switch (M.S.)／Auto Seek Switch (SEEK)
Manual Tuning (DOWN)／HOUR Adjust／CD Backward (◀◀) Button
Manual Tuning (UP)／MINUTE Adjust／CD Forward (▶▶) Button
Memory Switch (ME)
FM Stereo／Monaural Switch (ST)
DISC Indicator
PAUSE Indicator
CD Track No. and Elapsed Time／FM or AM Reception／Clock Indicator
ONE／ALL Indicator (REPEAT)
FM Stereo Indicator
FM1／FM2／AM Indicator
PLAY／PAUSE Switch
REPEAT Switch
SCAN Switch
Auto Disc Initializer Switch (ADI)
Preset Switches

Figure 1

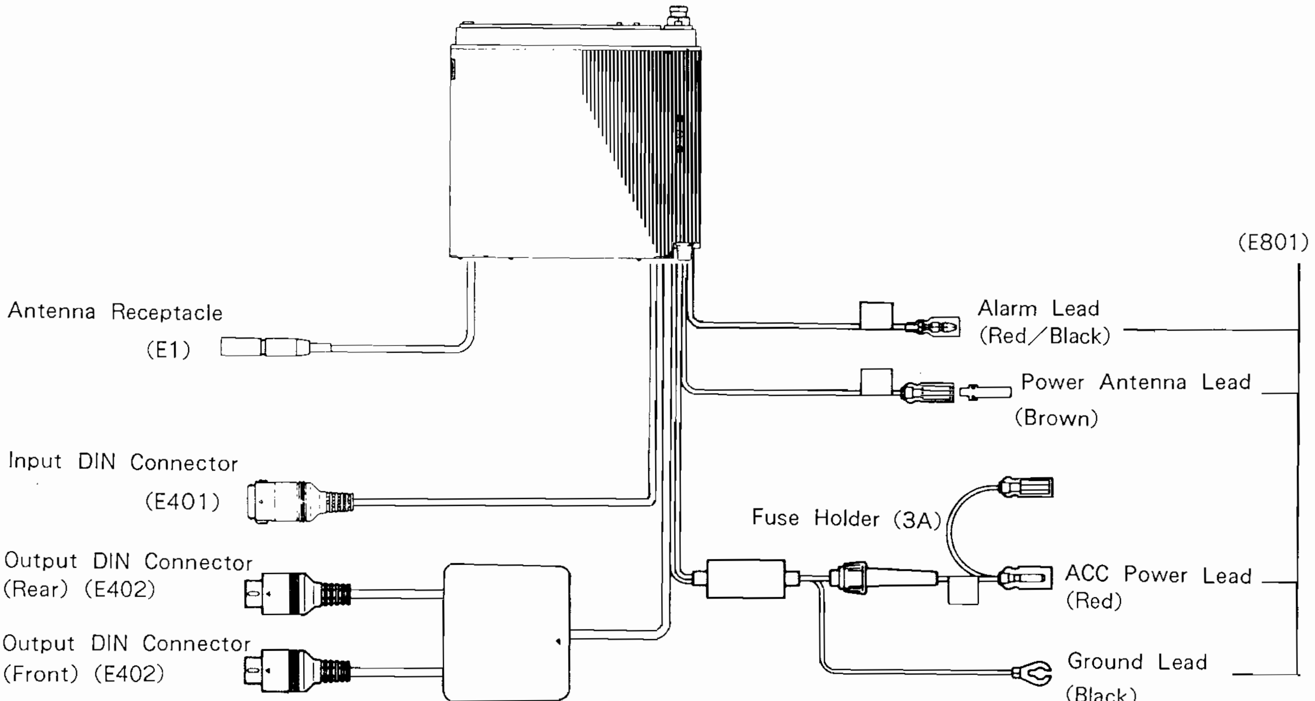

(E801)
Antenna Receptacle (E1)
Alarm Lead (Red／Black)
Power Antenna Lead (Brown)
Input DIN Connector (E401)
Fuse Holder (3A)
ACC Power Lead (Red)
Output DIN Connector (Rear) (E402)
Output DIN Connector (Front) (E402)
Ground Lead (Black)

Figure 2

< Cabinet Section >

1. Removal of Top Cover

(1) Remove eight screws marked "○" as shown in Figures 3 and 4.

(2) Pull out the top cover in the arrow direction as shown in Figure 3.

(3) Top Cover with Blacket Stopper Assy can be removed completely.

2. Removal of Bottom Cover

(1) Remove two screws marked "△" as shown in Figure 4.

3. Removal of Nose Piece

(1) After removal of the top cover, remove two control knobs (A, B) and two slide knobs (Treble, Bass) as shown in Figure 3.

(2) Remove two screws marked "□" as shown in Figures 5 and 6.

4. Removal of CD Player

(1) After removal of the nose piece, remove four screws marked "×" as shown in Figure 7.

(2) Disconnect all parallel wires Flex. P.C. Board from the CD Player.

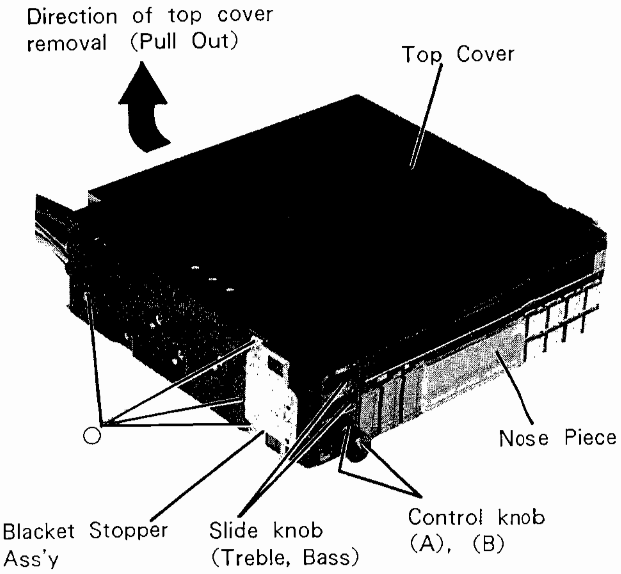

Direction of top cover
removal (Pull Out)
Top Cover
○
Nose Piece
Blacket Stopper
Ass'y
Slide knob
(Treble, Bass)
Control knob
(A), (B)

Figure 3

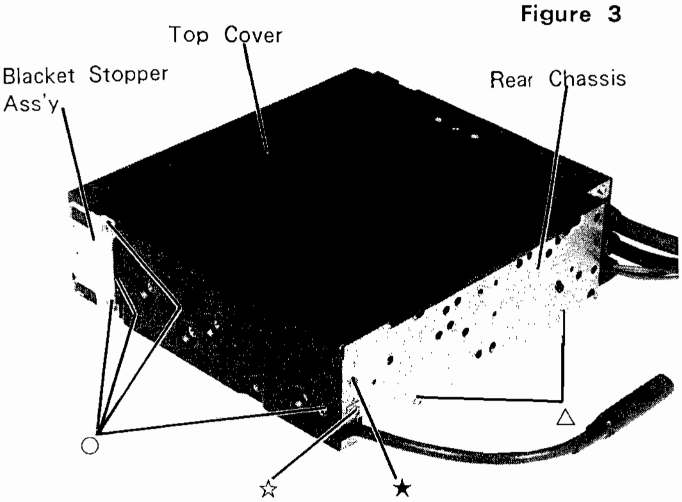

Top Cover
Blacket Stopper
Ass'y
Rear Chassis
○
△
☆
★

Figure 4

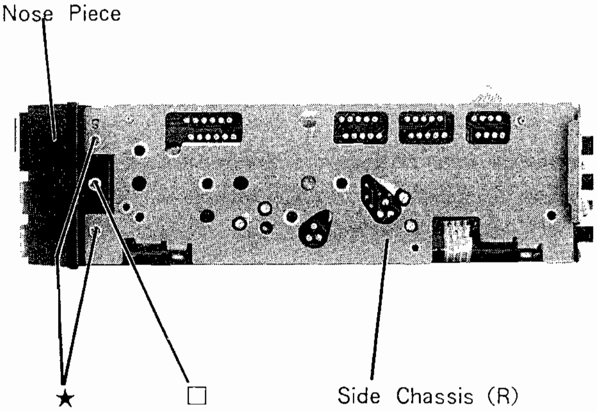

Nose Piece
★
□
Side Chassis (R)

Figure 5

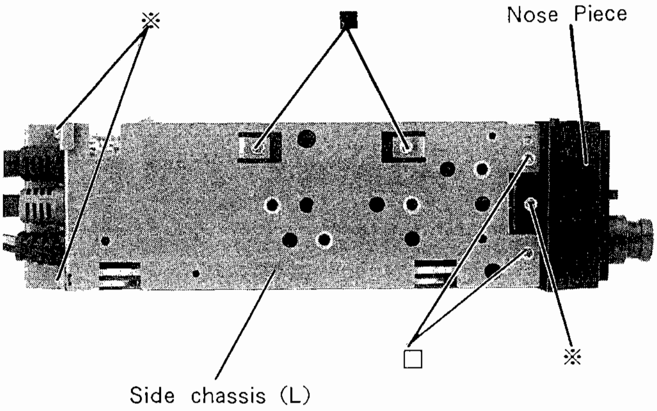

※
■
Nose Piece
□
※
Side chassis (L)

Figure 6

5. Removal of Front P.C. Board

(1) After removal of the bottom cover and nose piece, disconnect parallel wires (A) and Flex. P.C. Boards from the Main P.C. Board as shown in Figure 9 by removing the solder (a).

(2) Remove two screws marked "●" as shown in Figure 8.

6. Removal of Side Chassis (R)

(1) After removal of the CD player and bottom cover, disconnect the parallel wire (B) as shown in Figure 9 by removing the solder (b).

(2) Disconnect the solder (C) as shown in Figure 9.

(3) Remove five screws marked "★" as shown in Figures 4, 5 and 9.

(4) Disconnect all parallel wires from the Main P.C. Board.

(5) Side Chassis (R) with Control P.C. Board can be removed completely.

7. Removal of Control P.C. Board

(1) After removal of the side chassis (R), remove two screws marked "▲" as shown in Figure 10.

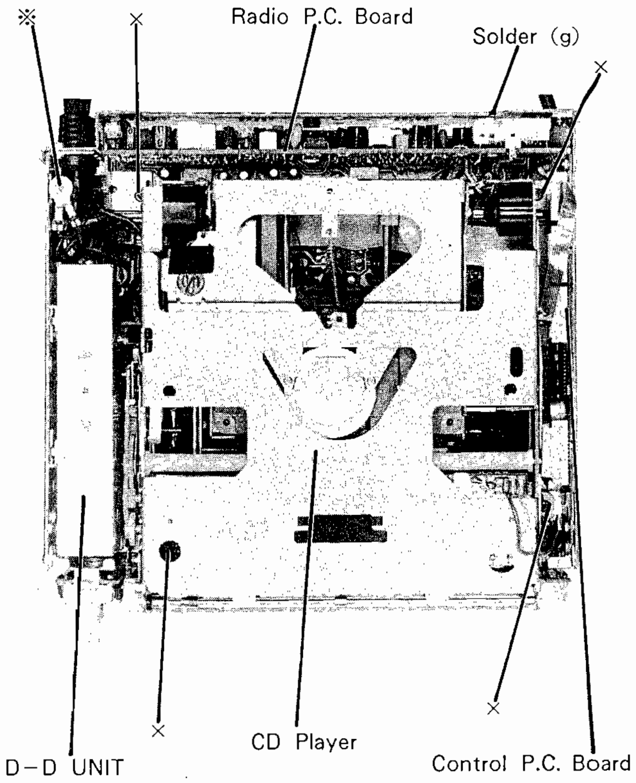

※
×
Radio P.C. Board
Solder (g)
×
×
×
D−D UNIT
CD Player
Control P.C. Board

Figure 7

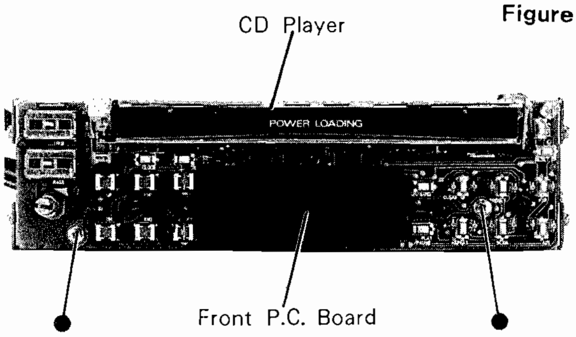

CD Player
POWER LOADING
●
Front P.C. Board
●

Figure 8

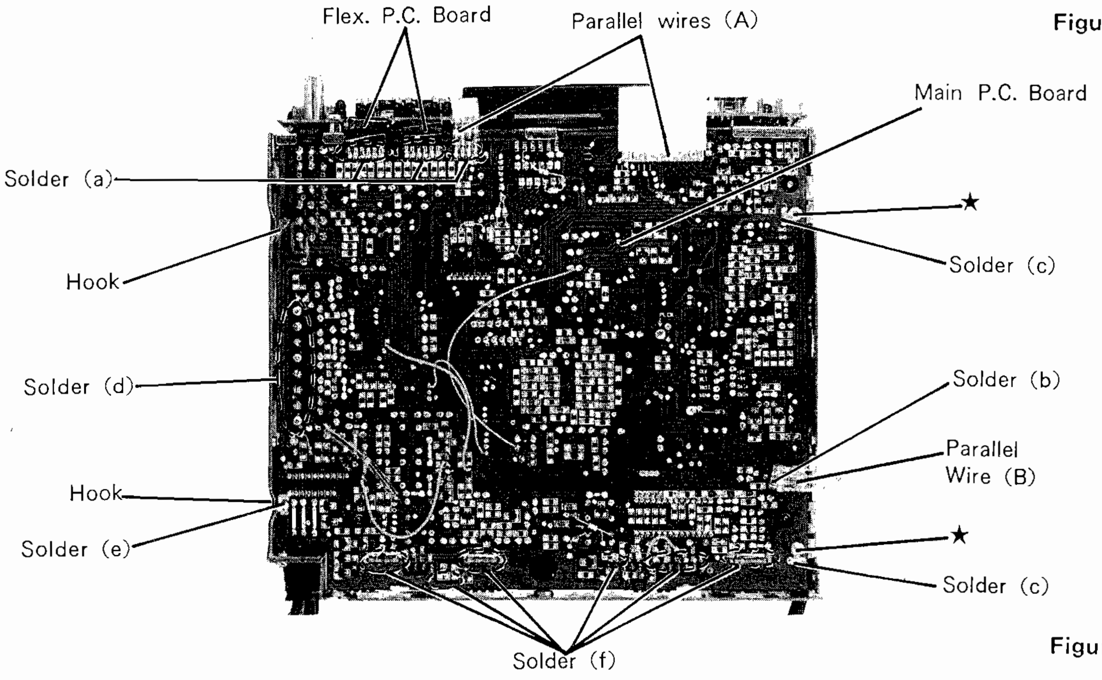

Flex. P.C. Board
Parallel wires (A)
Main P.C. Board
Solder (a)
★
Hook
Solder (c)
Solder (d)
Solder (b)
Parallel Wire (B)
Hook
★
Solder (e)
Solder (c)
Solder (f)

Figure 9

8. Removal of D−D Unit

(1) After removal of the CD player and bottom cover, remove the solder (d) as shown in Figure 9.

(2) Remove two screws marked "■" as shown in Figure 6.

9. Removal of Side Chassis (L)

(1) After removal of D−D Unit, remove the solder (e) as shown in Figure 9.

(2) Remove two hooks as shown in Figure 9.

(3) Remove five screws marked "※" as shown in Figures 6 and 7.

10. Removal of Rear Chassis

(1) After removal of the side chassis (L) and side chassis (R), remove the solder (g) as shown in Figure 7.

(2) Remove one screw marked "☆" as shown in Figure 4.

11. Removal of Main P.C. Board

(1) After removal of the Front P.C. Board and the rear chassis, remove a nut as shown in Figure 11.

(2) Disconnect all wires from the Main P.C. Board and the Radio P.C. Board.

(3) The Main P.C. Board with the Radio P.C. Board can be removed completely.

12. Removal of Radio P.C. Board

(1) After removal of the Main P.C. Board, remove the solder (f) as shown in Figure 9.

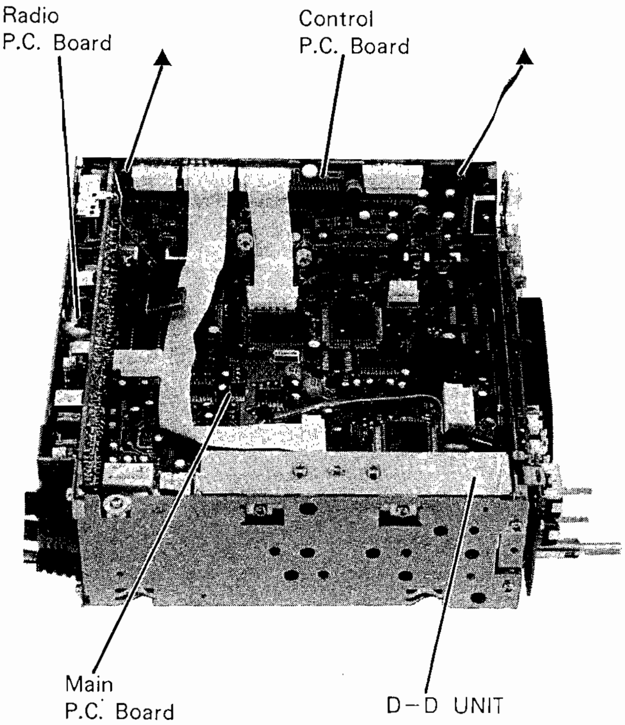


Figure 10

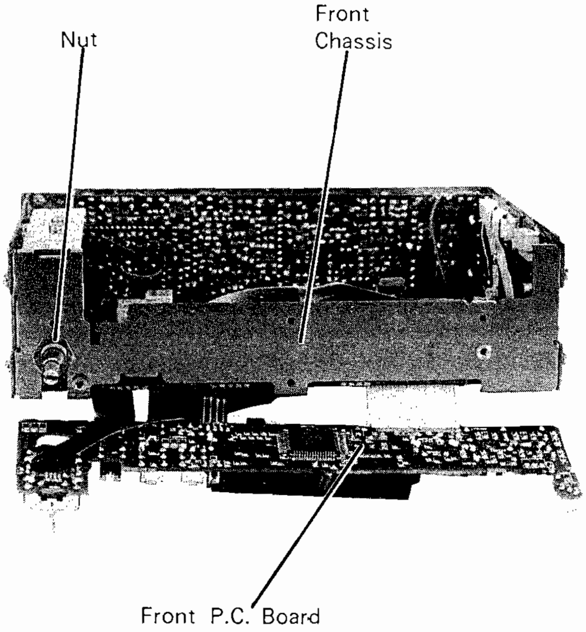


Figure 11

< Mechanism Section >

1. Removal of RF AMP P.C. Board

(1) Remove two screws marked "○" as shown in Figure 12.

(2) Disconnect two FPC P.C. Boards from the Head Unit.

(3) Disconnect a wire from the Load P.C. Board.

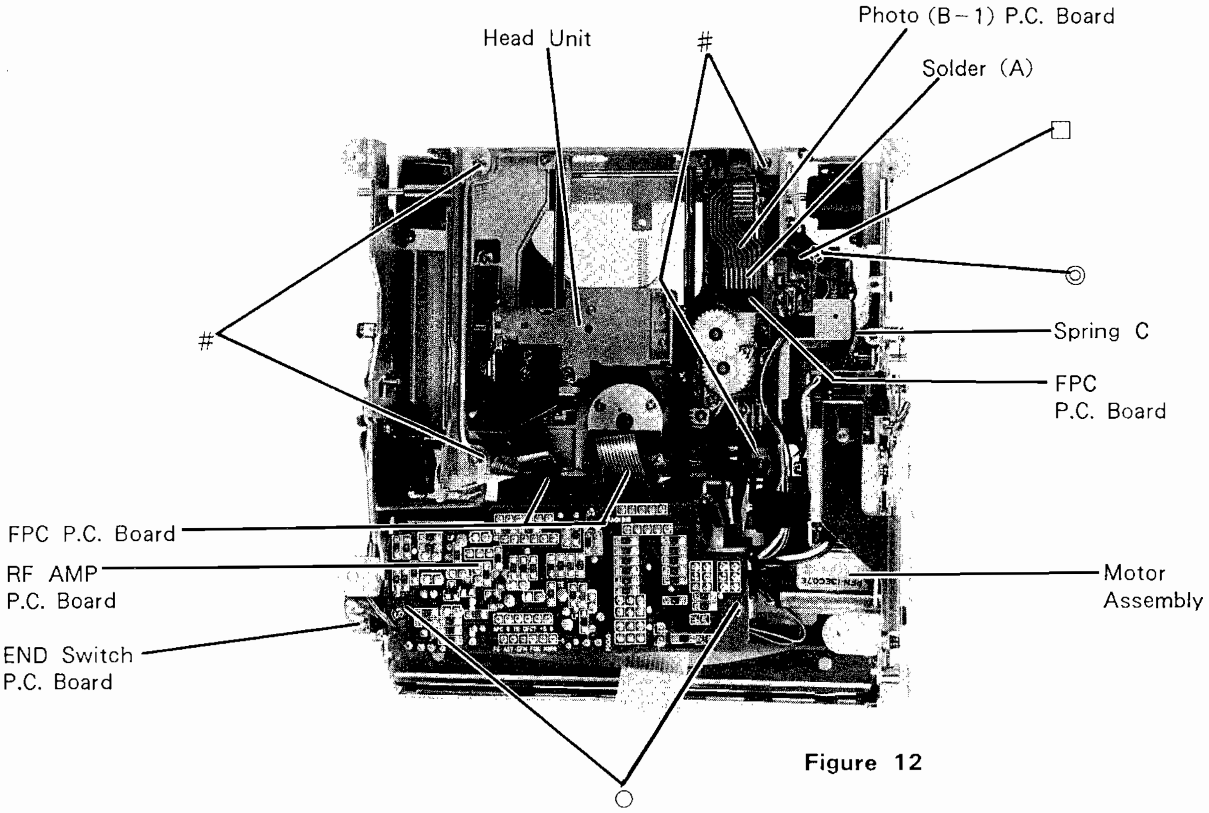

Head Unit
#
Photo (B-1) P.C. Board
Solder (A)
□
◎
Spring C
FPC
P.C. Board
#
FPC P.C. Board
RF AMP
P.C. Board
Motor
Assembly
END Switch
P.C. Board
○

Figure 12

2. Removal of Load P.C. Board

(1) After removal of RF AMP P.C. Board, disconnect all wires from the P.C. Board.

(2) Remove two screws marked "△" as shown in Figure 13.

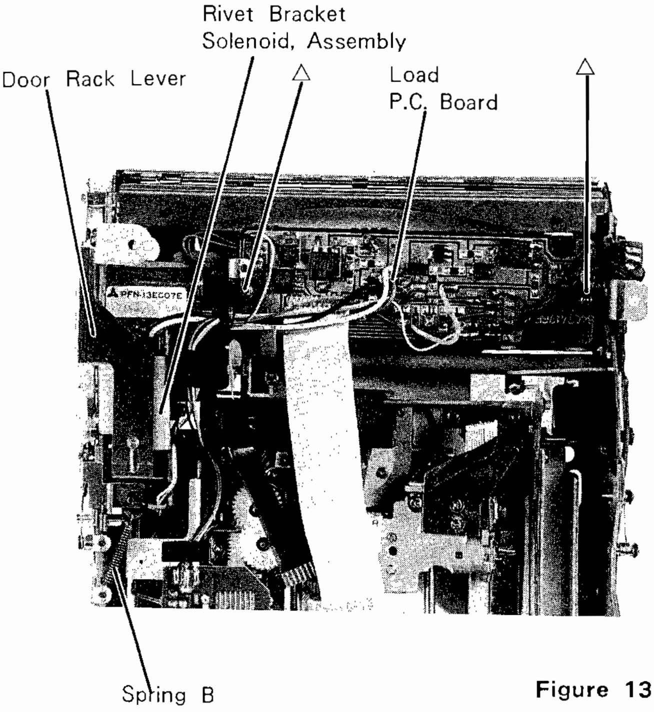

Rivet Bracket
Solenoid, Assembly
Door Rack Lever
△
Load
P.C. Board
△
Spring B

Figure 13

3. Removal of Photo (B-1) P.C. Board

(1) After removal of RF AMP P.C. Board, disconnect one FPC P.C. Board from the Head Unit as shown in Figure 12 by removing the solder (A).

(2) Remove one screw marked "□" as shown in Figure 12.

(3) Disconnect all wires from the P.C. Board.

4. Removal of Rivet Arm Clamp Assembly

(1) After removal of RF AMP P.C. Board, remove two springs and two rings as shown in Figures 14 and 15.

(2) Pull out the shaft from Bracket Head Assembly (L) ∕ (R).

(3) Disconnect two wires from Photo P.C. .Board (B −2).

(4) Rivet Arm Clamp Assembly with photo P.C. Board (B−2) can be removed completely.

5. Removal of Photo (B−2) P.C. Board

(1) After removal of Rivet Arm Clamp Assembly, remove one screw marked "◎" as shown in Figure 12.

6. Removal of End Switch P.C. Board

(1) After removal of RF AMP P.C. Board, remove a screw marked "×" as shown in Figure 16.

(2) Disconnect two wires from the P.C. Board.

7. Removal of Head Unit

(1) After removal of Photo (B−1) P.C. Board , remove four screws marked "△"as shown in Figure 12.

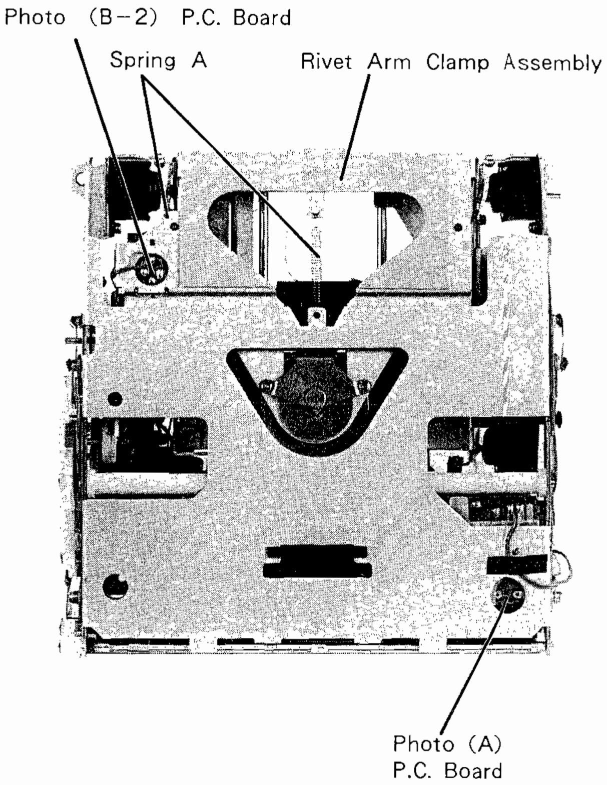


Photo (B−2) P.C. Board
Spring A
Rivet Arm Clamp Assembly
Photo (A)
P.C. Board

Figure 14

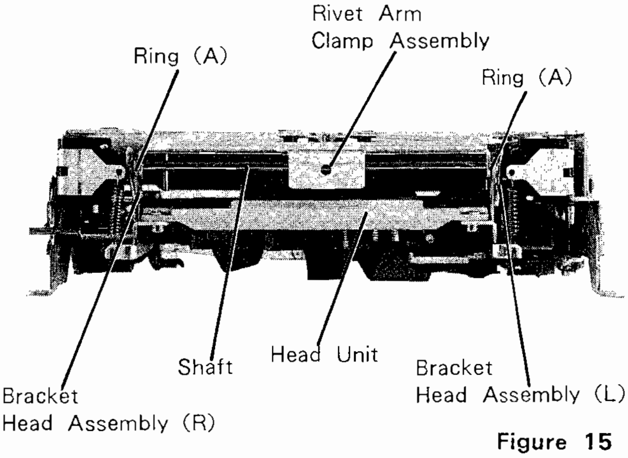

Rivet Arm
Clamp Assembly
Ring (A)
Ring (A)
Shaft
Head Unit
Bracket
Head Assembly (R)
Bracket
Head Assembly (L)

Figure 15

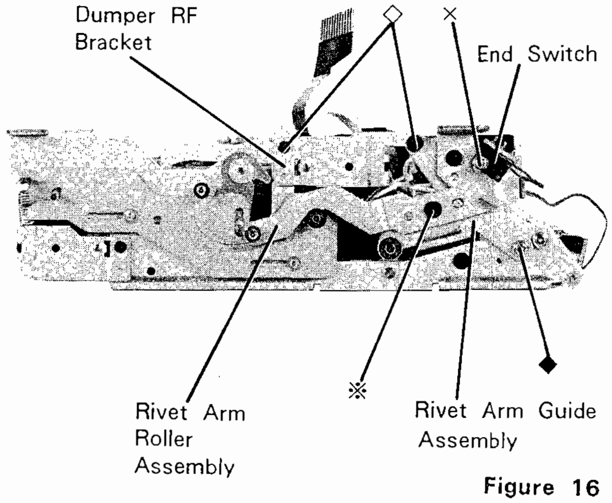

Dumper RF
Bracket
◇
×
End Switch
Rivet Arm
Roller
Assembly
※
◆
Rivet Arm Guide
Assembly

Figure 16

8. Removal of Rivet Bracket Solenoid Assembly

(1) After removal of Load P.C. Board and Head Unit, remove three gears as shown in Figure 17, by removing two washers A and one ring B.

(2) Remove one Rivet Gear Down Assembly as shown in Figures 13 and 17, by removing two springs B and one washer B.

(3) Remove a Door Rack Lever as shown in Figures 12 and 17 by removing one spring C and one washer C.

(4) Remove two screws marked "☆" as shown in Figure 18.

(5) Rivet Bracket Solenoid Assembly with Solenoid Assembly and Door Switch P.C. Board can be removed completely.

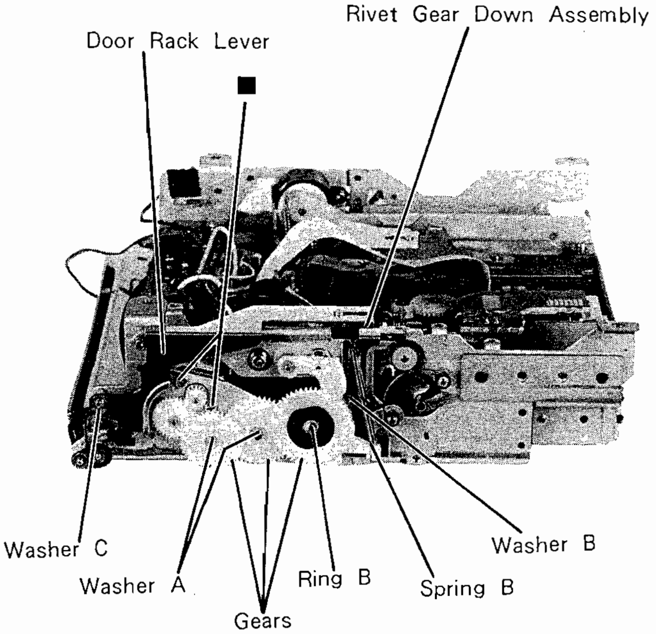

Rivet Gear Down Assembly
Door Rack Lever
■
Washer C
Washer A
Gears
Ring B
Washer B
Spring B

Figure 17

9. Removal of Solenoid Assembly

(1) After removal of Rivet Bracket Solenoid Assembly, remove two screws marked "●" as shown in Figure 19.

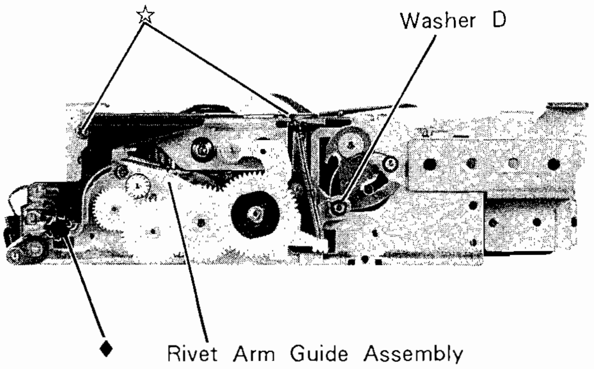

☆
Washer D
◆
Rivet Arm Guide Assembly

Figure 18

10. Removal of Door Switch P.C. Board

(1) After removal of Rivet Bracket Solenoid Assembly, remove a screw marked "▲" as shown in Figure 19.

11. Removal of Motor Assembly

(1) After removal of Rivet Bracket Solenoid Assembly, remove two screws marked "■" as shown in Figure 17.

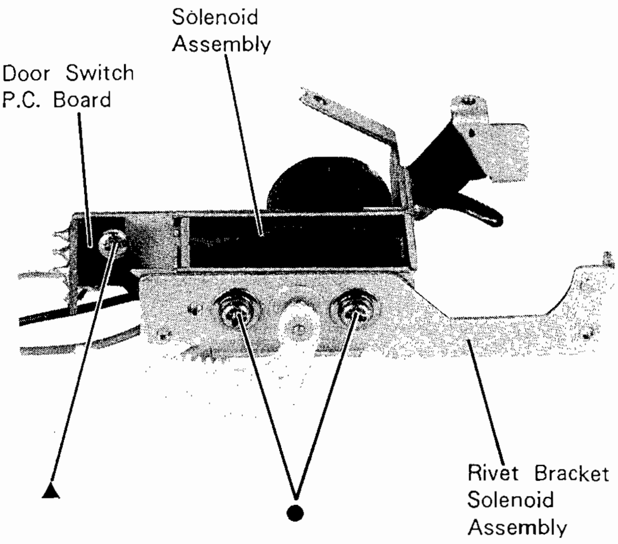

Solenoid Assembly
Door Switch P.C. Board
▲
●
Rivet Bracket Solenoid Assembly

Figure 19

12. Removal of Photo (A) P.C. Board

(1) After removal of Motor P.C. Board, remove Rivet Arm Roller Assembly as shown in Figure 16 by removing a screw marked "※".

(2) Remove Dumper RF Bracket as shown in Figure 16 by removing two screws marked "◇".

(3) Remove Rivet Arm Guide Assembly as shown in Figures 16 and 18 by removing one washer D and two screws marked "◆" as shown in Figure 18.

(4) Remove Disc Guide Cover by removing two screws marked "★" as shown in Figure 20.

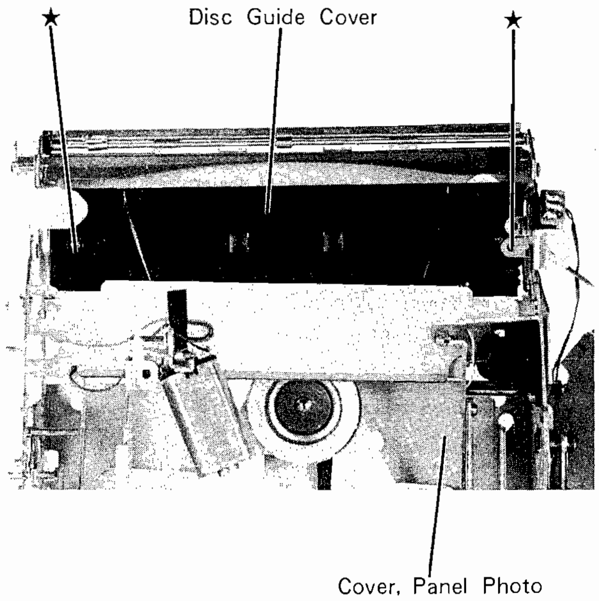

★
Disc Guide Cover
★
Cover, Panel Photo

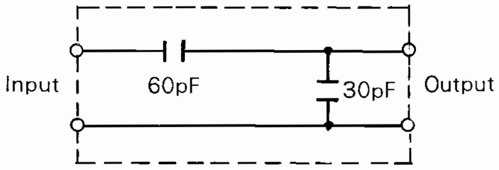
Figure 20

Adjustment Procedures

1. AM SECTION

(1) Dummy Antenna Circuit

(7902/7902E/7902F Only)


Input
60pF
30pF
Output

For 50 ohms AM Signal Generator

(2) Connections

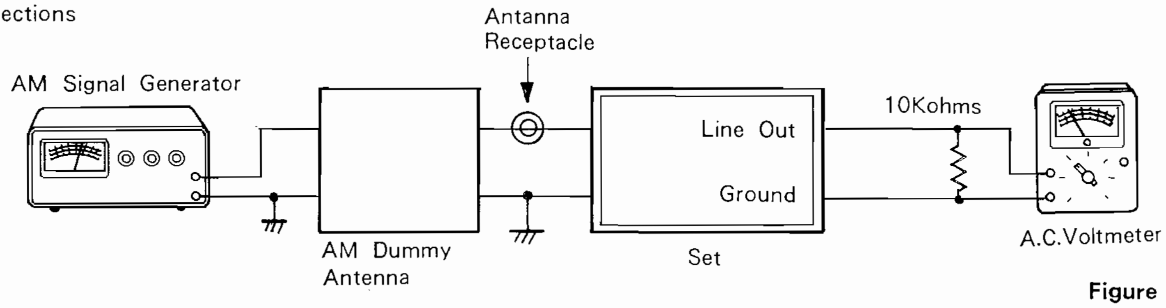

Antanna
Receptacle
AM Signal Generator
Line Out
Ground
10Kohms
AM Dummy
Antenna
Set
A.C.Voltmeter

Figure 21

(3) Control Settings

Power Switch ·································· ON
FM/AM Switch ····························· AM
LO/DX Switch ································ DX
Others ·· OFF

Volume Control ····················· Max. Position
Treble, Bass Control ················Mech. Center
Balance Control ···················· Center Position
Fader Control ······················· Front Position

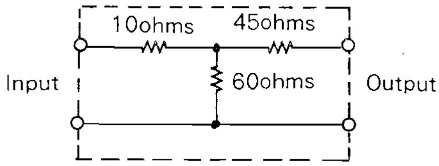
(4) Adjustment Procedures

Step	Description	Connection	Generator Frequency		Dial Control	Test Point	Adjustment
1	RF Adjustment	Figure 21	(1)	603kHz, 25dB μ (7902E/7902F) 600kHz, 15dB μ (7902) Mod : 400Hz 30%	603kHz (7902E/7902F) 600kHz (7902)	Line Out	T101, 102, 103, 104 for Maximum Output.
			(2)	1.404kHz, 25dB μ (7902E/7902F) 1.400kHz, 15dB μ (7902) Mod : 400Hz 30%	1.404kHz (7902E/7902F) 1.400kHz (7902)	Line Out	VC101, 102 for Maximum Output.
			(3)	Repeat steps 1 and 2. (But, Not Adjust T103 and T104.)			

1. FM SECTION

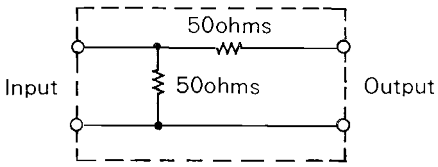
(1) Dummy Antenna Circuit

(7902 Model Only)


10ohms
45ohms
Input
60ohms
Output

For 50 ohms FM Signal Generator

(7902E/7902F Model Only)


50ohms
Input
50ohms
Output

For 50 ohms FM Signal Generator

(2) Connections

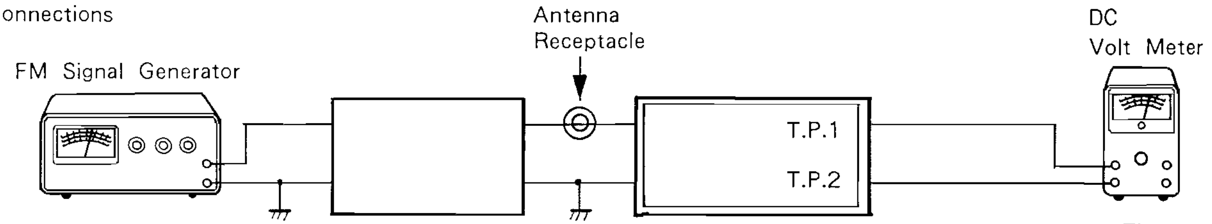

Antenna
Receptacle
DC
Volt Meter
FM Signal Generator
T.P.1
T.P.2
FM Dummy
Antenna
Unit Under Test

Figure 22

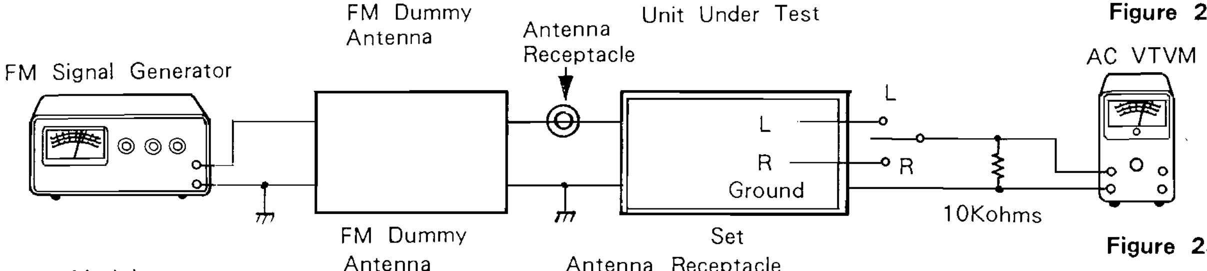

Antenna
Receptacle
FM Signal Generator
AC VTVM
L
L
R
R
Ground
10Kohms
FM Dummy
Antenna
Set

Figure 23

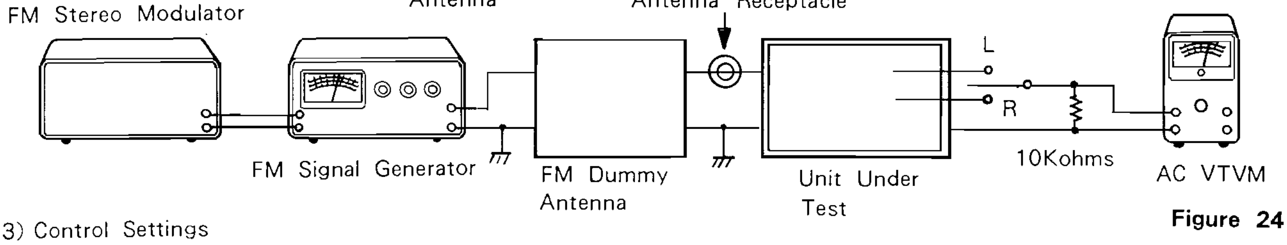

Antenna Receptacle
FM Stereo Modulator
L
R
FM Signal Generator
FM Dummy
Antenna
10Kohms
Unit Under
Test
AC VTVM

Figure 24

(3) Control Settings

Power Switch ································ON
FM/AM Switch ····························FM
Others ···OFF
Balance Control ·······················Mech. Center
Treble/Bass Control ················Mech. Center
Fader Control ························Front Position
Volume Control ·····················Max. Position
LO/DX Switch ·······························DX
ST. Switch ······································ON

(4) Adjustment Procedures

Step	Description		Connection	Signal Generator	Dial Control	Test Point	Adjustment
1	IF Adjustment		Figure 22	98MHz (7902E/7902F) 98.1MHz (7902), 66dB μ (7902) 60dB μ (7902E/7902F) (mod. 1kHz, dev. 75kHz (7902) 400Hz, dev. 22.5kHz (7902E/7902F))	98MHz (7902E/ 7902F) 98.1MHz (7902)	TP1, TP2	Adjust T2 to read 0±100mV on VTVM between TP1 and TP2.
2	Noise Level Adjustment	(1)	Figure 23	98MHz (7902E/7902F) 98.1MHz (7902), 66dB μ (7902) 60dB μ (7902E/7902F) (mod. 1kHz, dev. 75kHz (7902), 400Hz, dev. 22.5kHz (7902E/7902F))	98MHz (7902E/ 7902F) 98.1MHz (7902)	Audio Output	Adjust VR404 to obtain max. output. This value is 0dB.
		(2)	Figure 23	98MHz (7902E/7902F) 98.1MHz (7902), Output Level→Mini (mod. 400Hz, dev. 75kHz)	98MHz (7902E/ 7902F) 98.1MHz (7902)	Audio Output	Adjust VR1 to obtain 30±5dB (7902/7902E/7902F) output at SG level minimum.
3	3dB Limitting Sens. Adjustment	(1)	Figure 23	98MHz (7902E/7902F) 98.1MHz (7902), 66dB μ (7902) 60dB μ (7902E/7902F) (mod. 1kHz, dev. 75kHz (7902) 400Hz, dev. 22.5kHz (7902E/7902F))	98MHz (7902E/ 7902F) 98.1MHz (7902)	Audio Output	Adjust to obtain 0dB output in the state of step 2− (1).
		(2)	Figure 23	98MHz (7902E/7902F) 98.1MHz (7902), 18dB μ (7902) 12dB μ (7902E/7902F) (mod. 1kHz, dev. 75kHz (7902) 400Hz, dev. 22.5kHz (7902E/7902F))	98MHz (7902E/ 7902F) 98.1MHz (7902)	Audio Output	Adjust VR2 to obtain −3dB output.
4	Stereo Separation Adjustment (L)		Figure 24	98MHz (7902E/7902F) 98.1MHz (7902) 90dB μ (Stereo mode, L ch. only)	98MHz (7902E/ 7902F) 98.1MHz (7902)	Audio Output	Adjust VR3 for Rch. output to be minimumand confirm Lch. and Rch. output level difference is more than 25dB.
5	Stereo Brend Adjustment (L)		Figure 24	98MHz (7902E/7902F) 98.1MHz (7902), 30dB μ (7902), 45dB μ (7902E/7902F) (Stereo mode, L ch. only)	98MHz (7902E/ 7902F) 98.1MHz (7902)	Audio Output	Adjust VR4 for L and R out−put level difference to be 3±0.5dB (7902), 15dB (7902E/7902F)
6	Stereo Separa−tion Adjust−ment (R)		Figure 24	98MHz (7902E/7902F) 98.1MHz (7902) 90dB μ (Stereo mode, Rch. only)	98MHz (7902E/ 7902F) 98.1MHz (7902)	Audio Output	Proceed same adjustment under step 4 by alternating L and R.
7	Stereo Brend Adjustment (R)		Figure 24	98MHz (7902E/7902F) 98.1MHz (7902), 30dB μ (7902) 45dB μ (7902E/7902F) (Stereo mode, Rch. only)	98MHz (7902E/ 7902F) 98.1MHz (7902)	Audio Output	Proceed same adjustment under step 5.

3. CD SECTION

(1) Connections

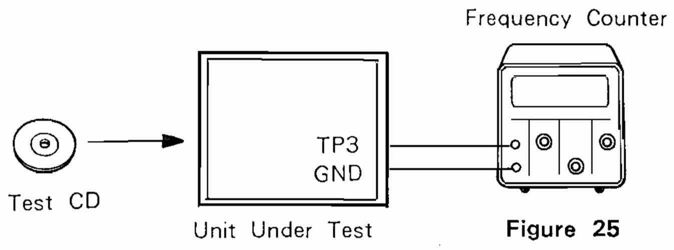

Frequency Counter
Test CD
TP3
GND
Unit Under Test

Figure 25

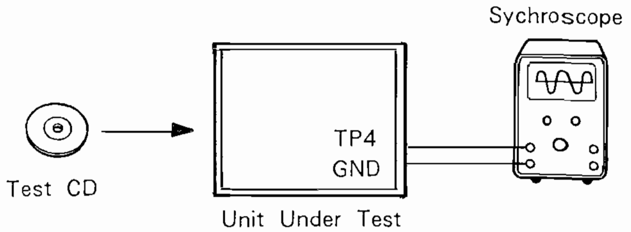

Sychroscope
Test CD
TP4
GND
Unit Under Test

Figure 26

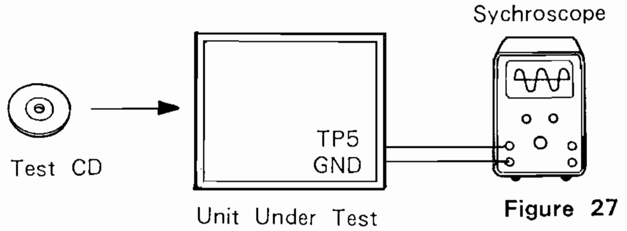

Sychroscope
Test CD
TP5
GND
Unit Under Test

Figure 27

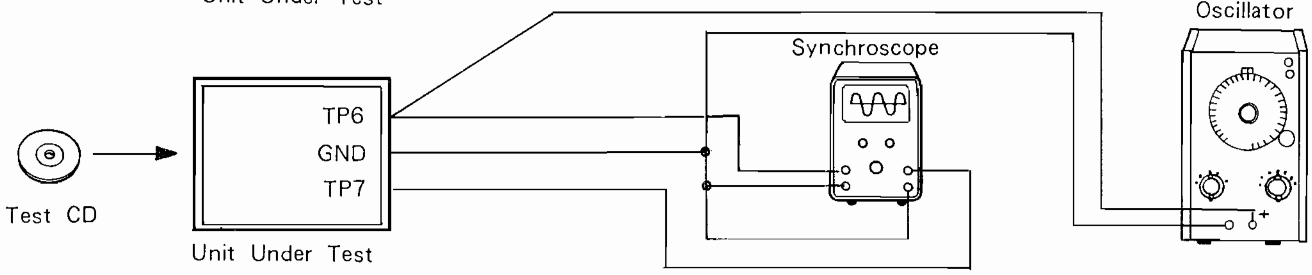

Oscillator
Synchroscope
Test CD
TP6
GND
TP7
Unit Under Test

Figure 28

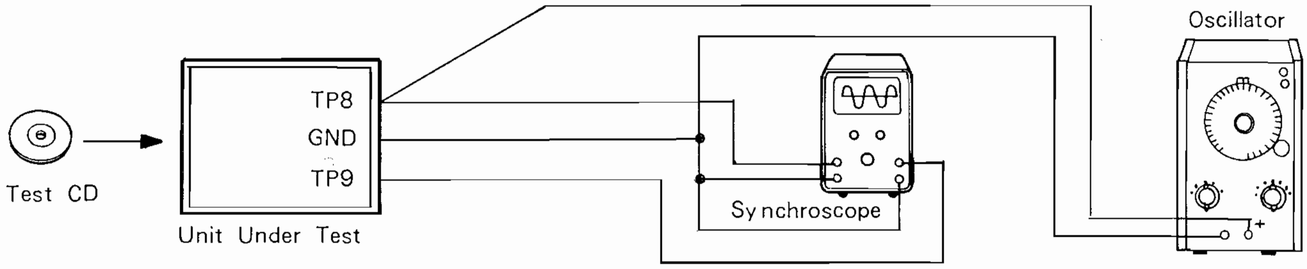
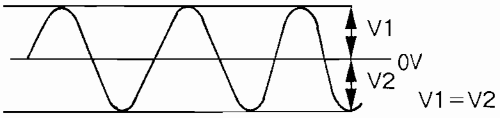

Oscillator
Test CD
TP8
GND
TP9
Synchroscope
Unit Under Test

Figure 29

(2) Control Settings

Power Switch	ON
Play/Pause Switch	ON
Volume Control	Mini. Position
Treble Control	Mech. Center
Bass Control	Mech. Center
Balance Control	Center Position
Fader Control	Center Position
Other Switches	OFF

(3) Adjustment Procedures

Step	Description	Connection	Oscillator	Test Point	Adjustment
1	VCO Adjustment	Figure 25	—	T.P.3	Adjust L 201 so that the frequency is 4.23MHz.
2	Tracking Offset Adjustment	Figure 26	—	T.P.4	(VR202→Minimum) Adjust VR301 so that the oscilloscope waveform is symmetrial above and below, relative to 0V. 
3	Focus Offset Adjustment	Figure 27	—	T.P.5	Adjust VR302 so that the amplitude of oscilloscope waveform is maximum.
4	Focus Gain Adjustment	Figure 28	2kHz 1V (P−P)	T.P.6 T.P.7	Adjust VR201 so that the voltage of TP6 and TP7 is 1V (P−P).
5	Tracking Gain Adjustment	Figure 29	2.4kHz 400mV (P−P)	T.P.8 T.P.9	Adjust VR202 so that the voltage of TP8 and TP9 is 400mV (P−P).

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick−up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE CHECK PROCEDURE

● Procedure 1

Monitor the laser diode emission by eyes.

(1) Turn the gear clockwise so that the rivet arm clamp assembly is placed in down position as shown in Figure 30.

(2) Blind the photo transistor (PT661) with a piece of paper as shown in Figure 30.

(3) Press the reset key (S918).

(4) Push PLAY／PAUSE key (S910) to obtain PLAY mode.

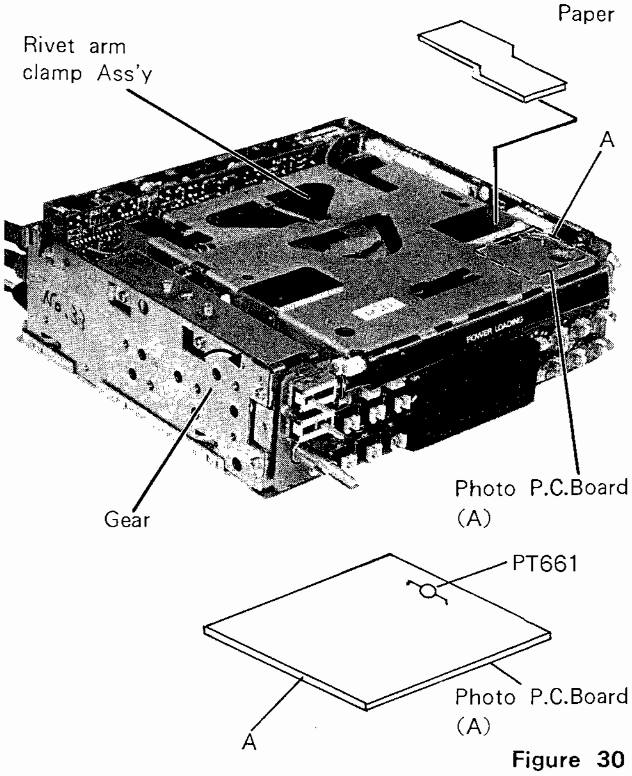


Figure 30

(5) Observe the objective lens confirm that the laser diode is emitting light. At this time, the laser diode goes on for about 3 seconds due to focus search. If it does not, APC circuit or FOP is defective.

● Procedure 2

Check current value.

(1) Turn off the power switch.

(2) Connect the AC voltmeter (or multimeter) across resistor R317 (10Ω) on the RF Amp P.C. Board.

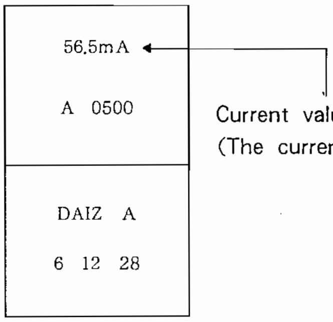
(3) Turn on the power switch.

(4) After inserting one disc, push S910 by hand to obtain PLAY mode.

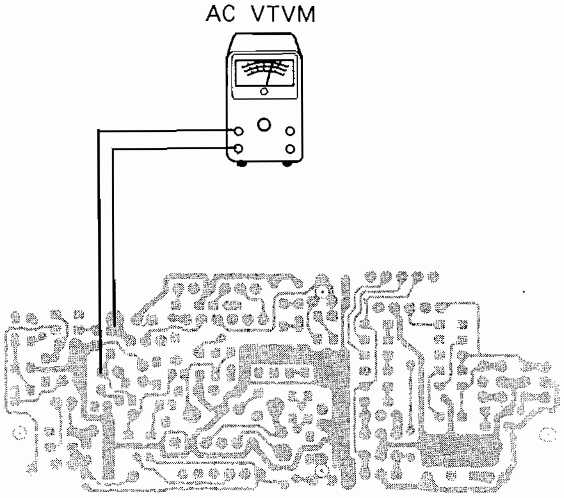
(5) Read the current value shown on the voltmeter to obtain the voltage value.

(6) The current value is indicated on the label affixed to the FOP.

(Label on FOP)



Current value
(The current value varies with the set.)



RF Amp P.C.Board — Pattern side —

Figure 31

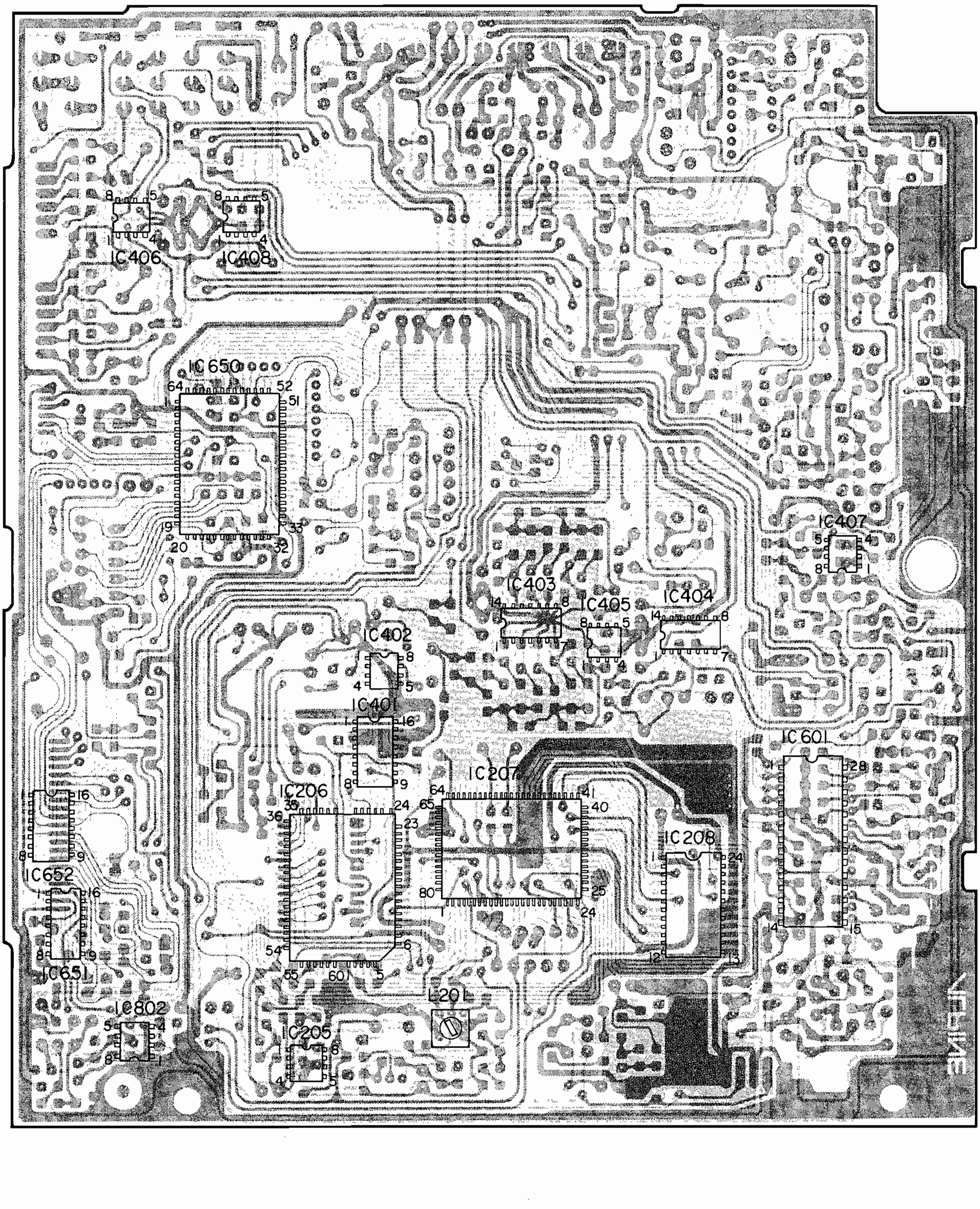
Confirm that the ammeter reading is within the range below.

value on the label +11, −5mA (25℃)
variation relative to temperature : 0.4mA/℃
(Current increases when temperatuer rises and decreases when it drops.)

If the value is more than the range given, APC circuit is defectine or the laser diode has deteriorated. It it is less, APC circuit,of FOP is defective.

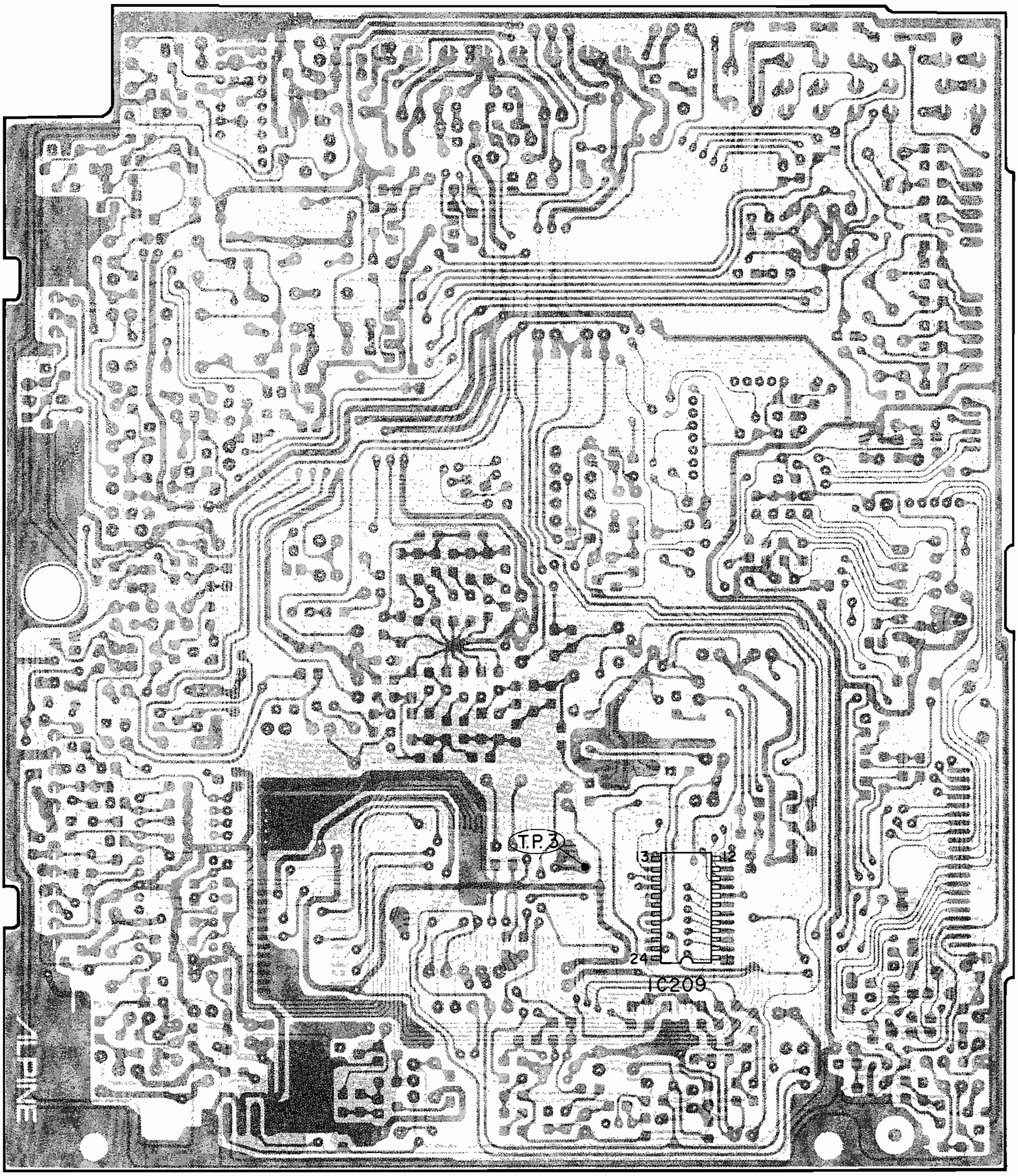
Adjustment Locations

Main P.C. Board (7902／7902E)


IC406
IC408
IC650
IC407
IC403
IC405
IC404
IC402
IC401
IC601
IC207
IC206
IC208
IC652
IC651
IC802
IC205
L201

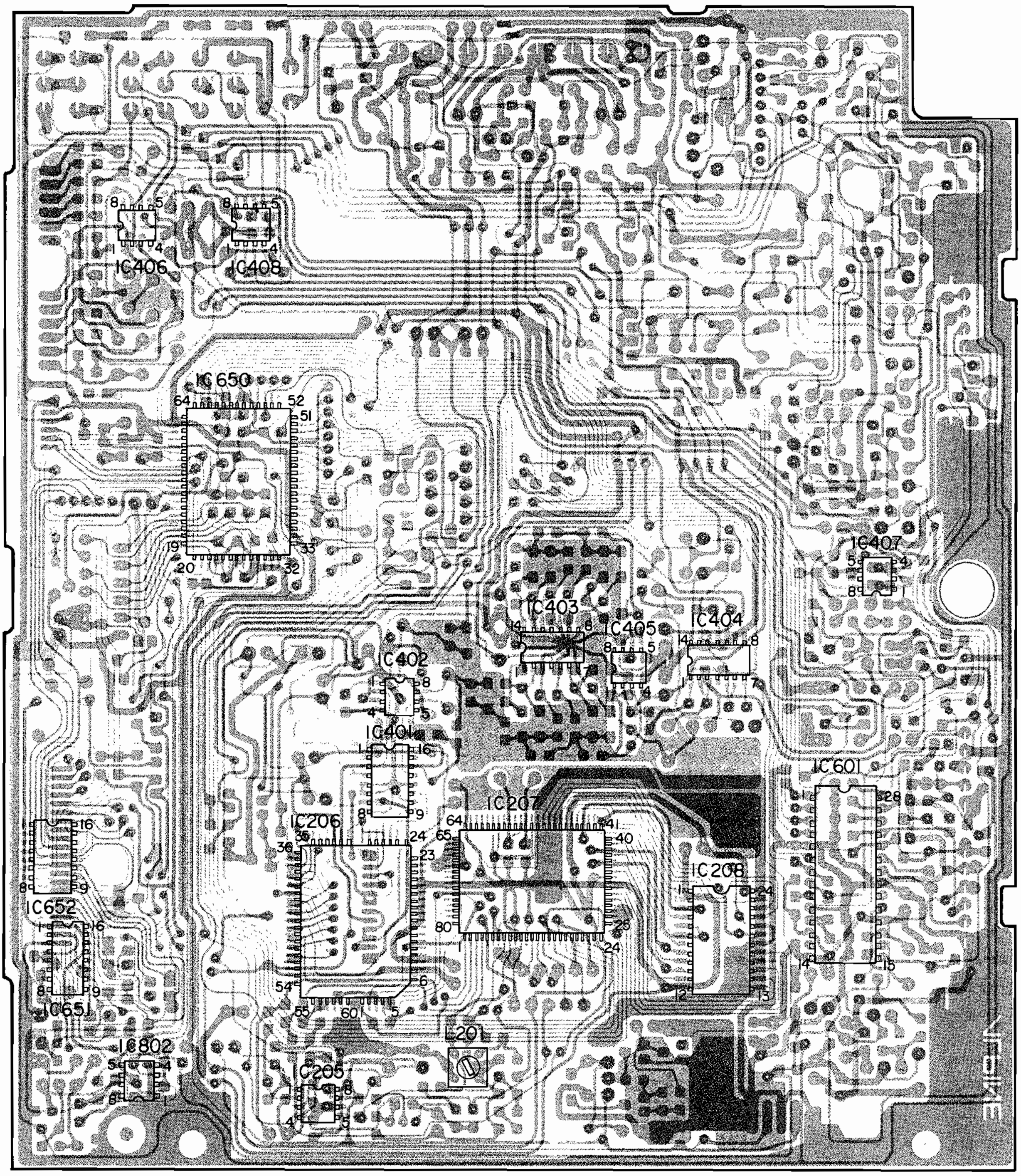
Top View

Main P.C. Board (7902/7902E)


T.P.3
3
12
24
IC209
ALPINE

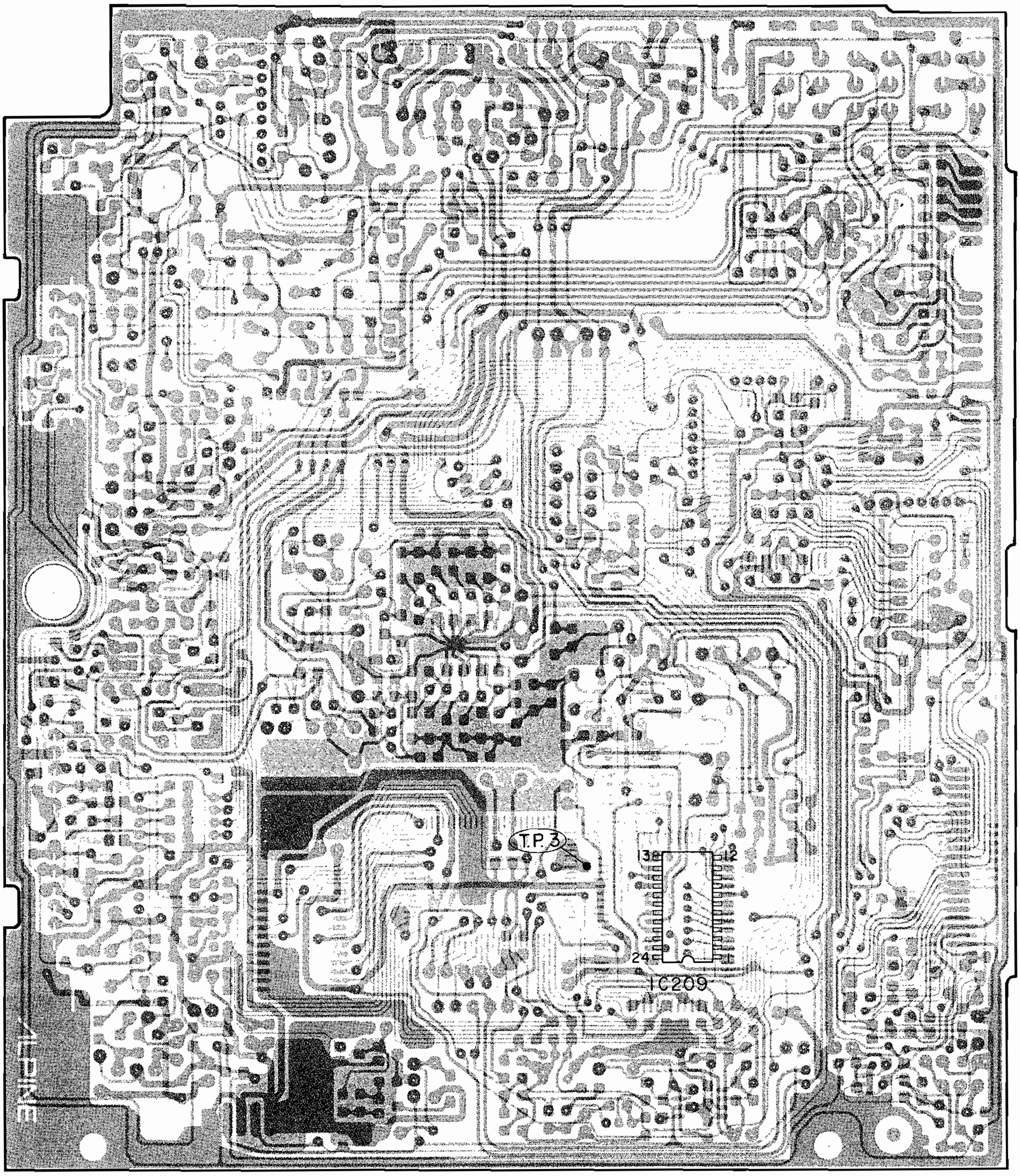
Bottom View

Main P.C. Board (7902F)


IC406
IC408
IC650
IC407
IC403
IC405
IC404
IC402
IC401
IC601
IC207
IC206
IC208
IC652
IC651
IC802
L201
IC205

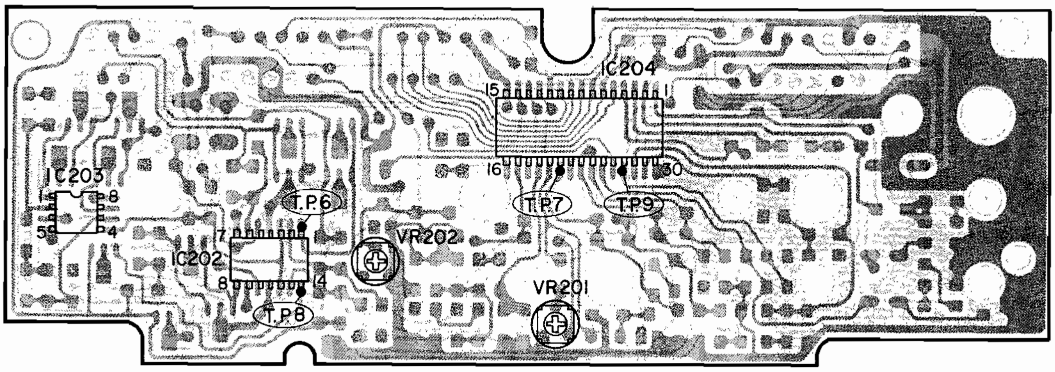
Top View

Main P.C. Board (7902F)

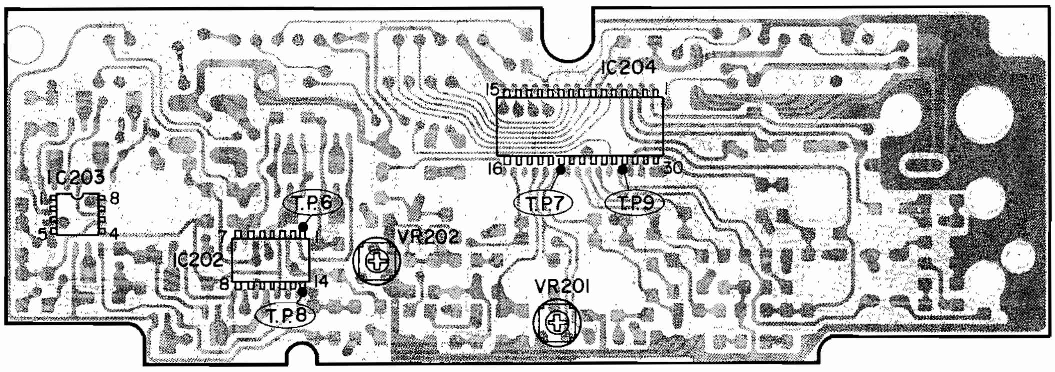

T.P.3
13
12
24
IC209
ALPINE

Buttom View

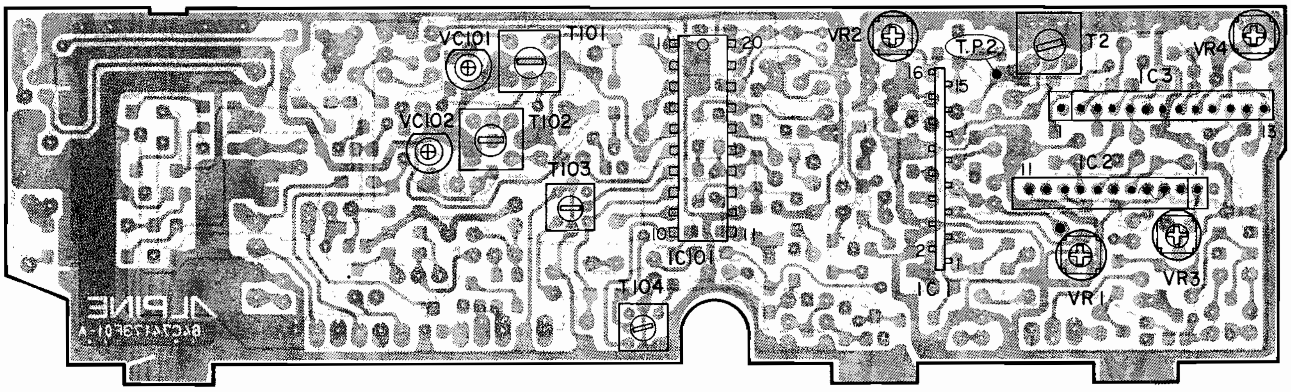
Control P.C. Board (7902／7902E)


IC204
15
1
16
30
IC203
1
8
5
4
T.P.6
T.P.7
T.P.9
7
IC202
8
14
VR202
VR201
T.P.8

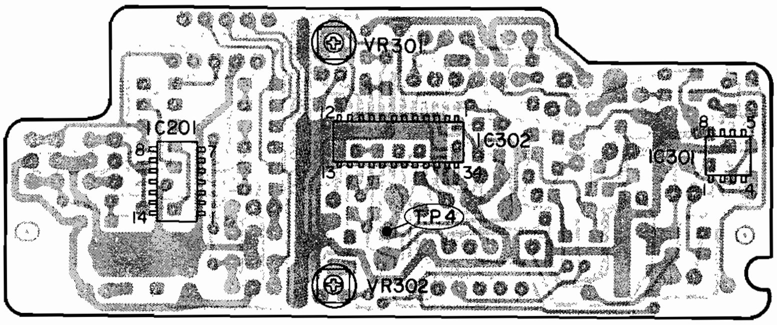
Control P.C. Board (7902F)


IC204
15
16
30
IC203
8
5
4
T.P.6
T.P.7
T.P.9
7
IC202
8
14
VR202
VR201
T.P.8

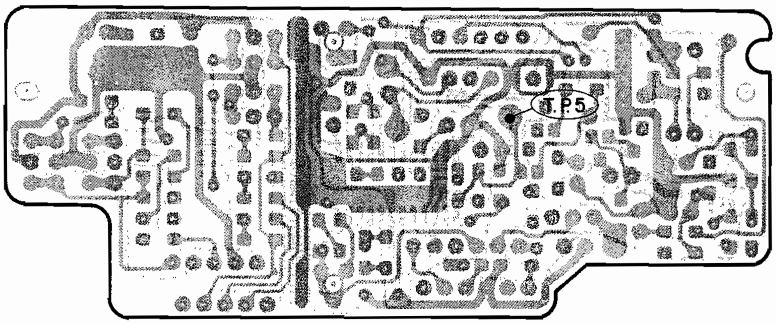
Radio P.C. Board


VC101
T101
1
20
VR2
T.P.2
T2
VR4
16
15
IC3
1
13
VC102
T102
T103
IC2
11
1
10
11
IC101
2
1
16
T104
VR1
VR3
ALPINE

RF AMP P.C. Board

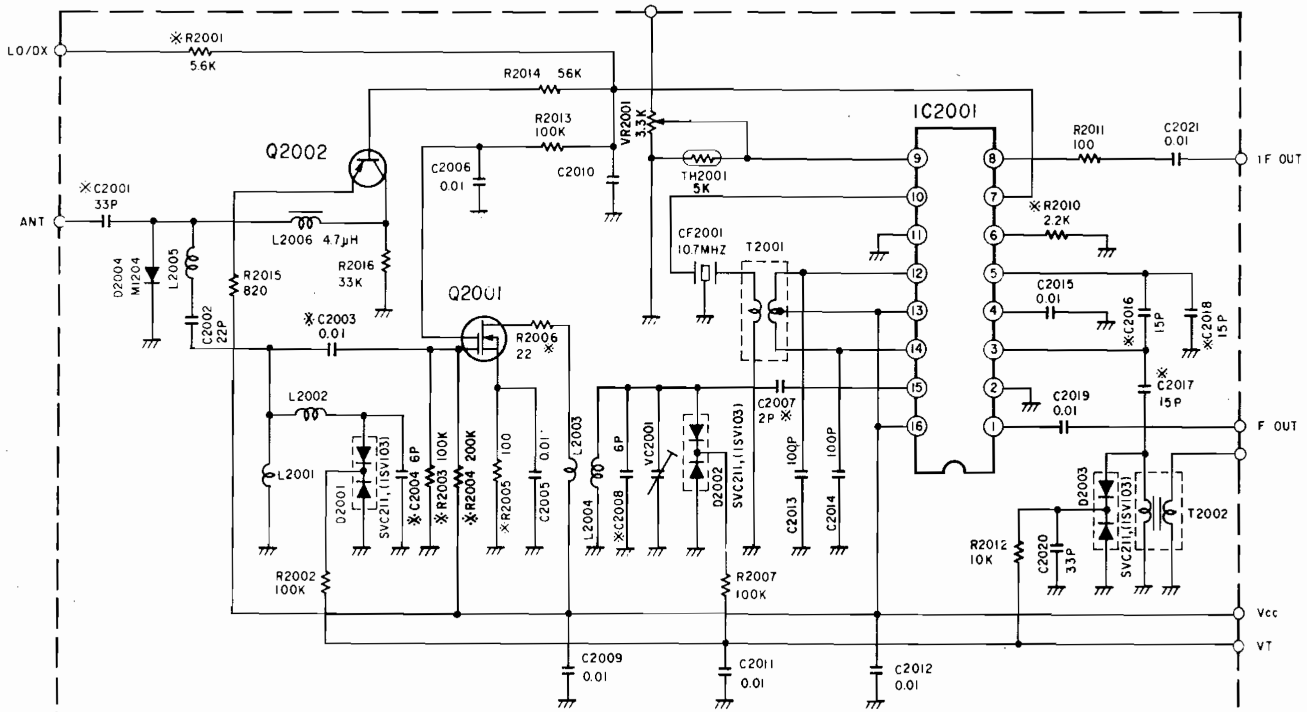

VR301
IC201
8
7
14
1
12
IC302
13
34
IC301
8
5
1
4
TP4
VR302

Top View



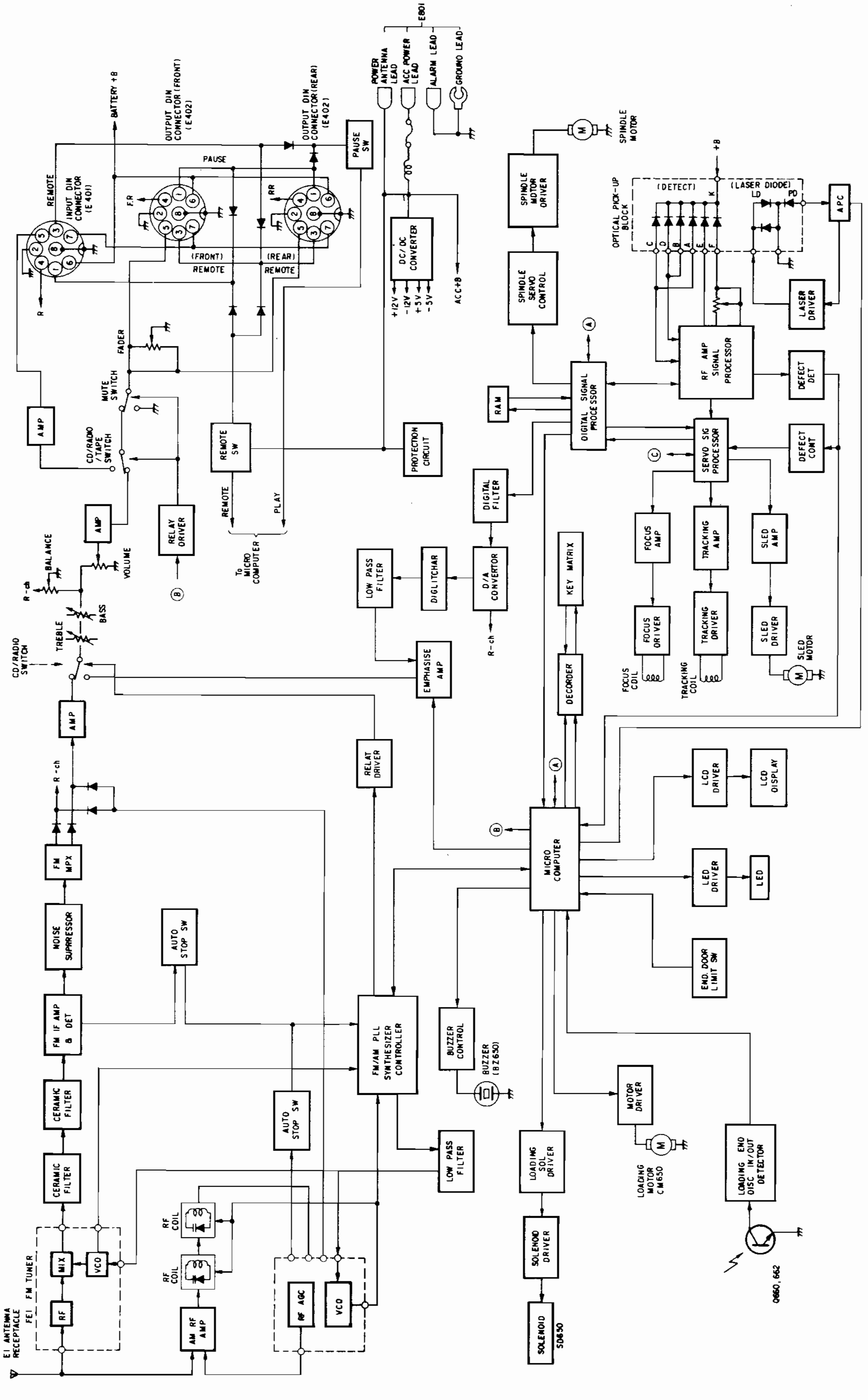
Buttom View

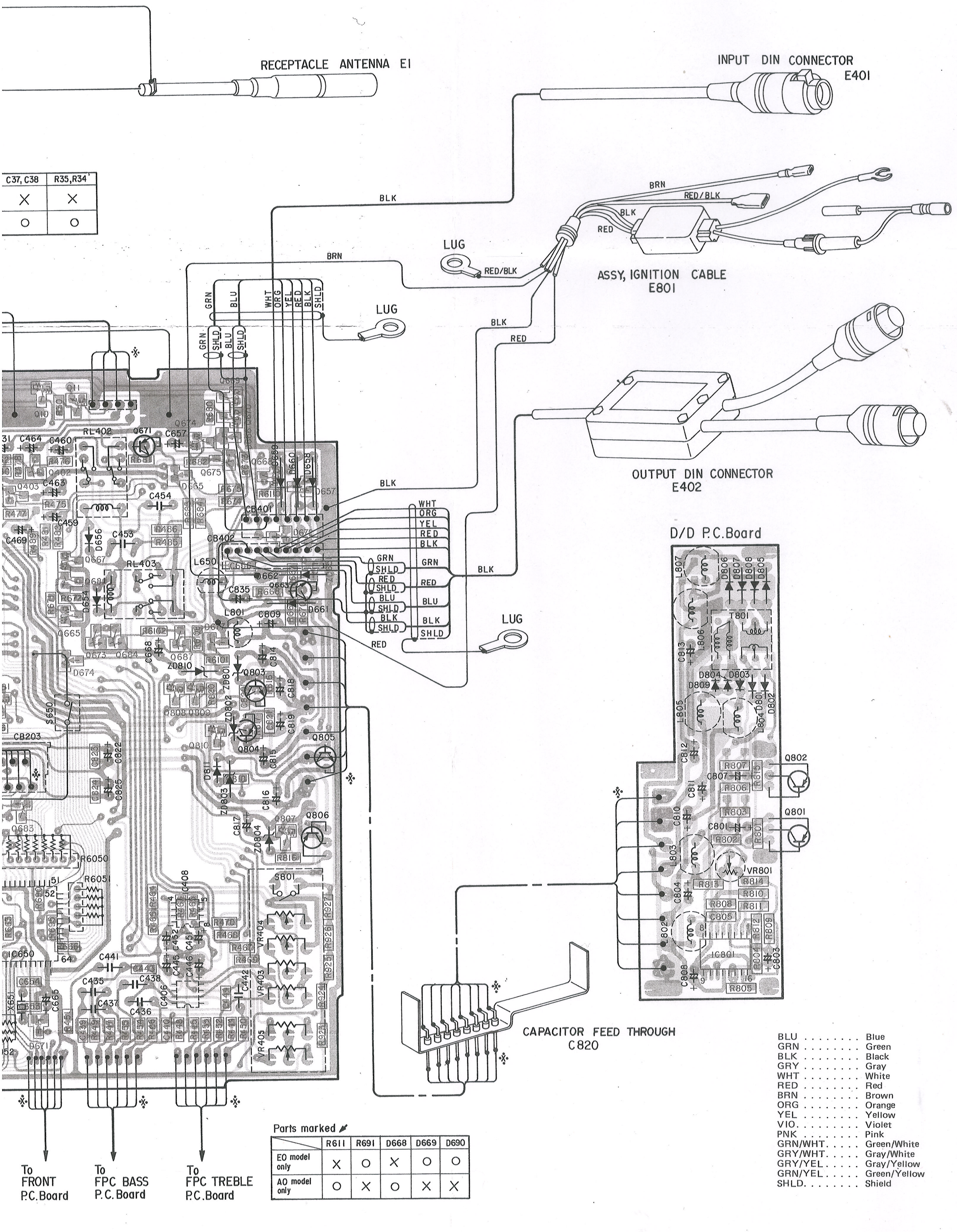
FM Tuner Schematic Diagram


LO/DX
※R2001
5.6K
R2014 56K
R2013
100K
VR2001
3.3K
IC2001
R2011
100
C2021
0.01
IF OUT
Q2002
C2006
0.01
C2010
TH2001
5K
※C2001
33P
ANT
L2006 4.7μH
※R2010
2.2K
D2004
MI204
L2005
R2015
820
R2016
33K
CF2001
10.7MHZ
T2001
C2015
0.01
※C2016
15P
※C2018
15P
C2002
22P
Q2001
※C2003
0.01
R2006
22 ※
※
C2017
15P
L2002
C2007
2P ※
C2019
0.01
F OUT
L2001
D2001
SVC211,(1SV103)
※C2004 6P
※R2003 100K
※R2004 200K
※R2005 100
C2005 0.01
L2003
L2004
※C2008 6P
VC2001
D2002
SVC211,(1SV103)
C2013 100P
C2014 100P
D2003
SVC211,(1SV103)
T2002
R2012
10K
C2020
33P
R2002
100K
R2007
100K
Vcc
VT
C2009
0.01
C2011
0.01
C2012
0.01
9
10
11
12
13
14
15
16
8
7
6
5
4
3
2
1

Note: Parts marked※are for adjustment.

Block Diagram


E1 ANTENNA RECEPTACLE
FE1 FM TUNER
RF
MIX
VCO
CERAMIC FILTER
CERAMIC FILTER
FM IF AMP & DET
NOISE SUPPRESSOR
FM MPX
R-ch
AMP
CD/RADIO SWITCH
TREBLE
BASS
R-ch
BALANCE
VOLUME
AMP
CD/RADIO /TAPE SWITCH
MUTE SWITCH
FADER
AMP
R
REMOTE
INPUT DIN CONNECTOR (E401)
OUTPUT DIN CONNECTOR (FRONT) (E402)
OUTPUT DIN CONNECTOR (REAR) (E402)
BATTERY +B
F.R
RR
PAUSE
PAUSE SW
(FRONT) REMOTE
(REAR) REMOTE
RELAY DRIVER
REMOTE SW
REMOTE
PLAY
To MICRO COMPUTER
AUTO STOP SW
AUTO STOP SW
AM RF AMP
RF COIL
RF COIL
RF AGC
VCO
FM/AM PLL SYNTHESIZER CONTROLLER
LOW PASS FILTER
RELAY DRIVER
EMPHASISE AMP
LOW PASS FILTER
DIGLITCHAR
D/A CONVERTOR
R-ch
DIGITAL FILTER
RAM
DIGITAL SIGNAL PROCESSOR
PROTECTION CIRCUIT
POWER ANTENNA LEAD
ACC POWER LEAD
ALARM LEAD
GROUND LEAD
E801
DC/DC CONVERTER
+12V
-12V
+5V
-5V
ACC+B
SPINDLE MOTOR
SPINDLE MOTOR DRIVER
SPINDLE SERVO CONTROL
OPTICAL PICK-UP BLOCK
(DETECT)
(LASER DIODE)
LD
PD
C D B A E F K
+B
APC
LASER DRIVER
RF AMP SIGNAL PROCESSOR
DEFECT DET
SERVO SIG PROCESSOR
DEFECT CONT
FOCUS AMP
TRACKING AMP
SLED AMP
FOCUS DRIVER
TRACKING DRIVER
SLED DRIVER
FOCUS COIL
TRACKING COIL
SLED MOTOR
KEY MATRIX
DECORDER
MICRO COMPUTER
LCD DRIVER
LCD DISPLAY
LED DRIVER
LED
END DOOR LIMIT SW
BUZZER CONTROL
BUZZER (BZ650)
MOTOR DRIVER
LOADING MOTOR CM650
LOADING SOL DRIVER
SOLENOID DRIVER
SOLENOID SD650
LOADING END DISC IN/OUT DETECTOR
Q660, 662
A
B
C



RECEPTACLE ANTENNA E1
INPUT DIN CONNECTOR
E401
BRN
RED/BLK
BLK
RED
LUG
RED/BLK
ASSY, IGNITION CABLE
E801
BRN
GRN
BLU
WHT
ORG
YEL
RED
BLK
SHLD
LUG
GRN SHLD
BLU SHLD
OUTPUT DIN CONNECTOR
E402
CB401
CB402
WHT
ORG
YEL
RED
BLK
GRN
SHLD
RED
SHLD
BLU
SHLD
BLK
SHLD
GRN
RED
BLU
BLK
SHLD
LUG
RED
D/D P.C.Board
T801
IC801
VR801
Q801
Q802
Q803
Q804
Q805
Q806
Q807
RL402
RL403
S650
S801
VR403
VR404
VR405
CB203
IC650
C37, C38
R35,R34
CAPACITOR FEED THROUGH
C820
To
FRONT
P.C.Board
To
FPC BASS
P.C.Board
To
FPC TREBLE
P.C.Board

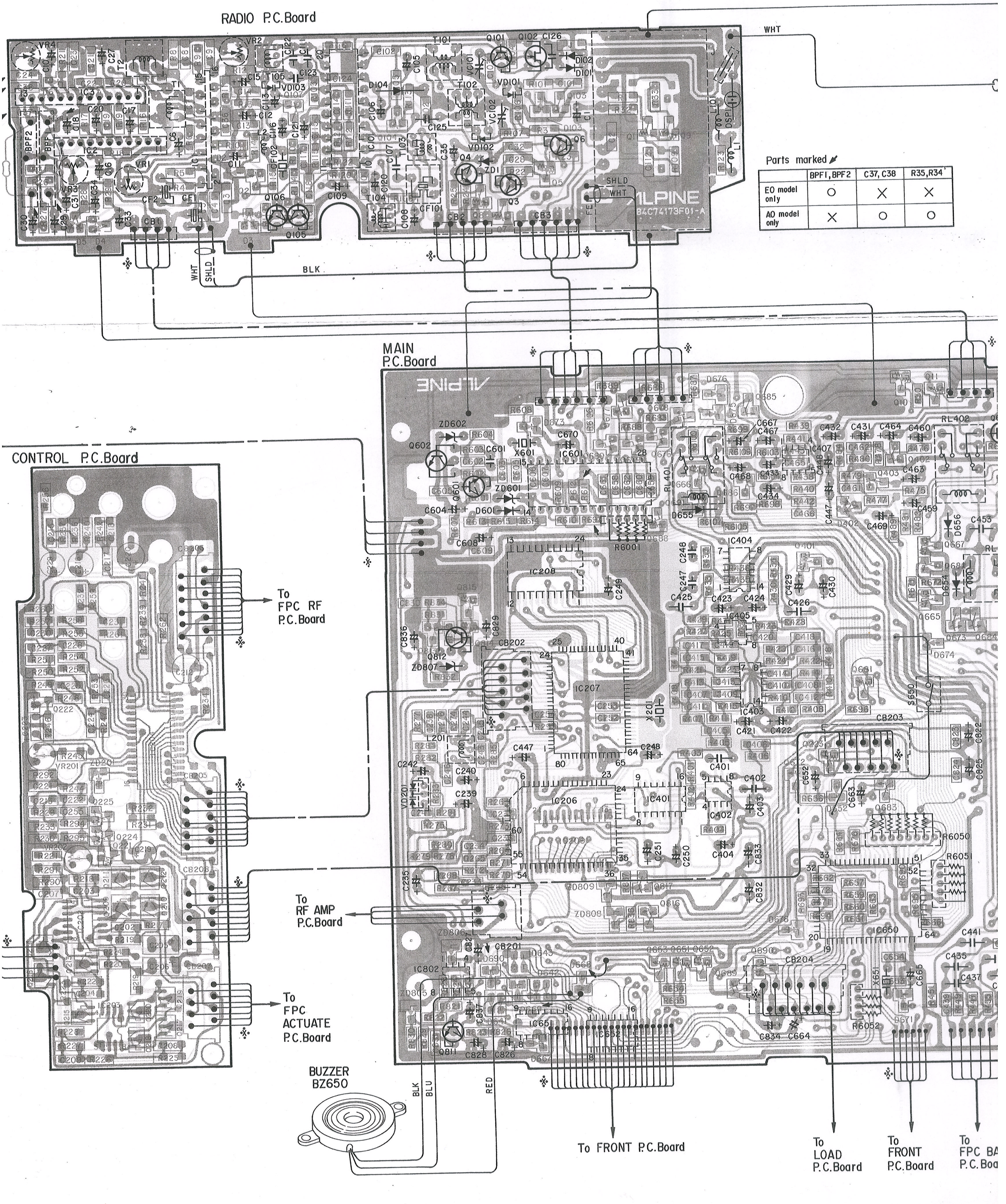
C37, C38	R35,R34
×	×
○	○

Parts marked ✎

	R611	R691	D668	D669	D690
EO model only	×	○	×	○	○
AO model only	○	×	○	×	×

BLU	Blue
GRN	Green
BLK	Black
GRY	Gray
WHT	White
RED	Red
BRN	Brown
ORG	Orange
YEL	Yellow
VIO	Violet
PNK	Pink
GRN/WHT	Green/White
GRY/WHT	Gray/White
GRY/YEL	Gray/Yellow
GRN/YEL	Green/Yellow
SHLD	Shield

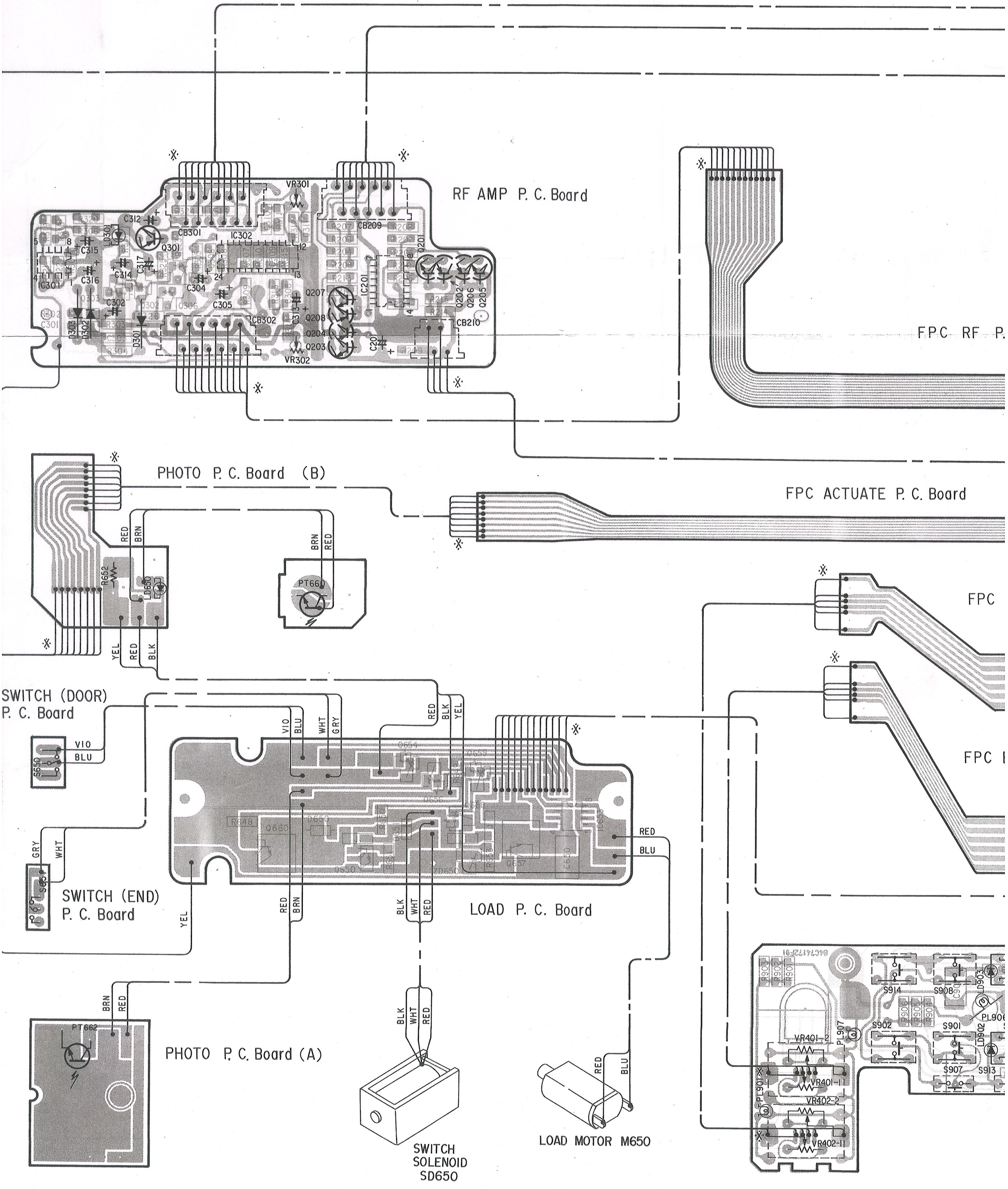
ts Layout on P.C. Boards and Wiring Diagram ● (7902/7902E model only)

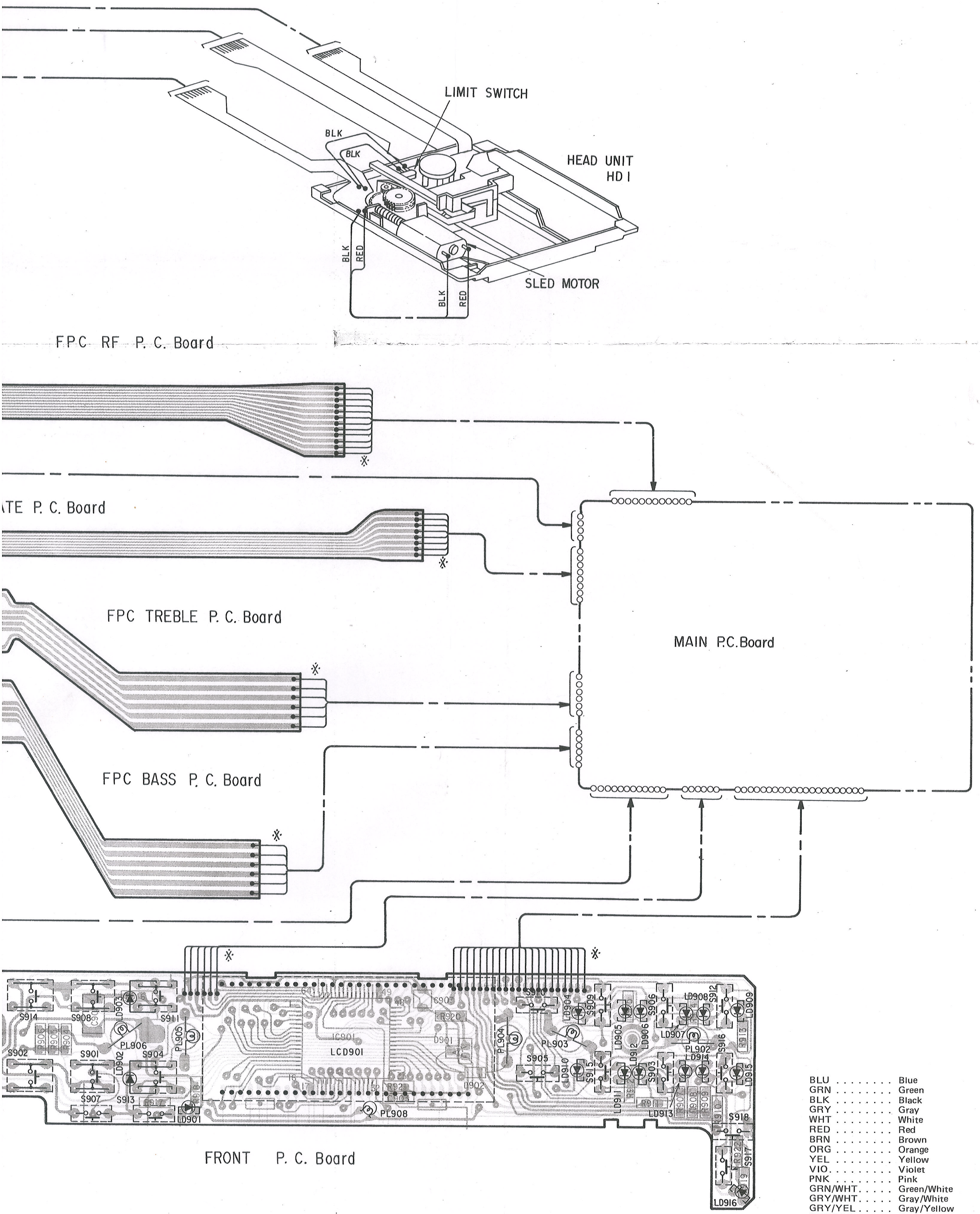

RADIO P.C.Board
WHT
SHLD
BLK
ALPINE
84C74173F01-A
MAIN P.C.Board
CONTROL P.C.Board
To FPC RF P.C.Board
To RF AMP P.C.Board
To FPC ACTUATE P.C.Board
BUZZER BZ650
BLK
BLU
RED
To FRONT P.C.Board
To LOAD P.C.Board
To FRONT P.C.Board
To FPC BA
P.C.Boa

Parts marked ✎

	BPF1, BPF2	C37, C38	R35, R34
EO model only	○	×	×
AO model only	×	○	○

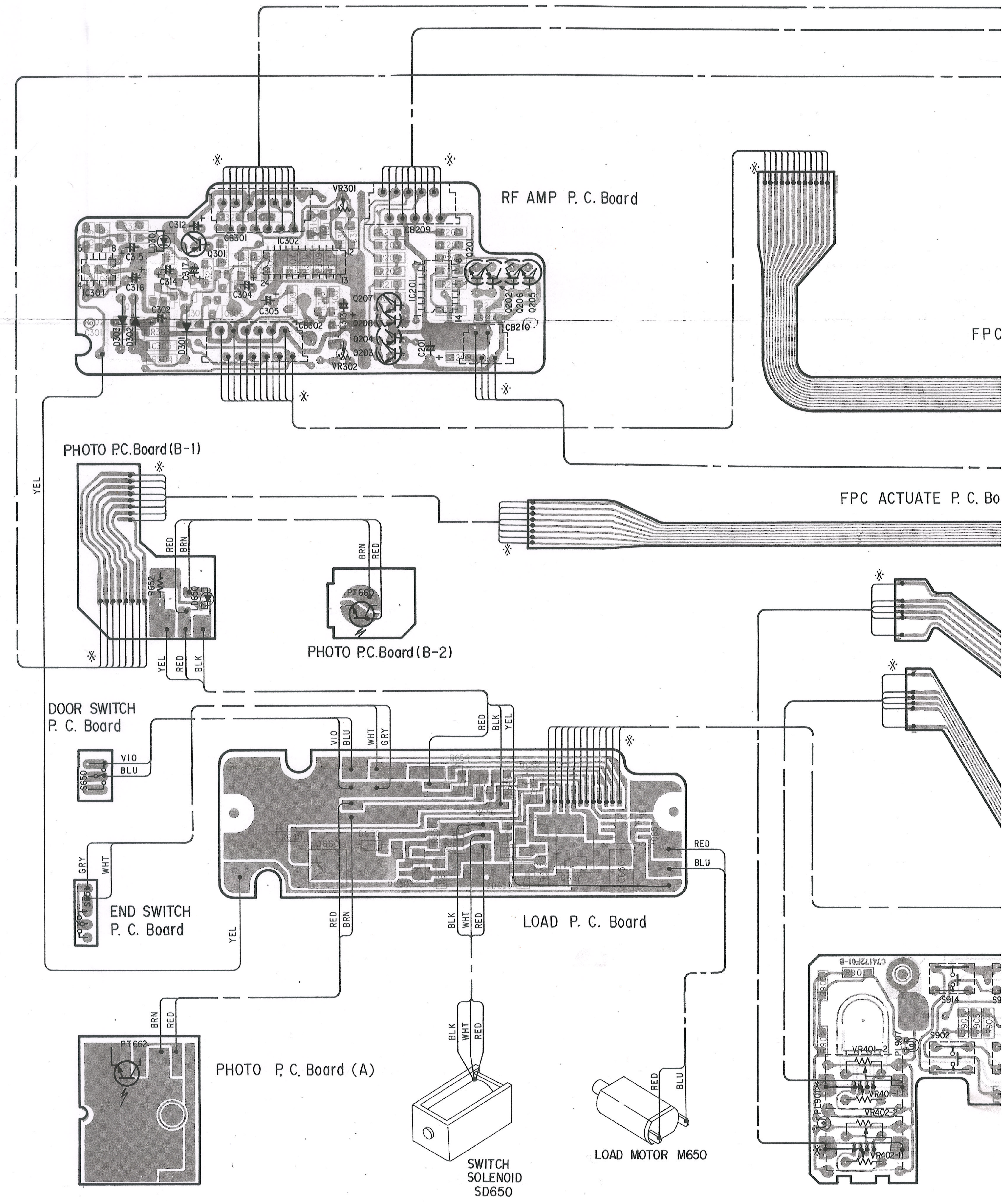
Parts Layout on P.C. Boards and Wiring Diagram ● (7902／7902E model only)

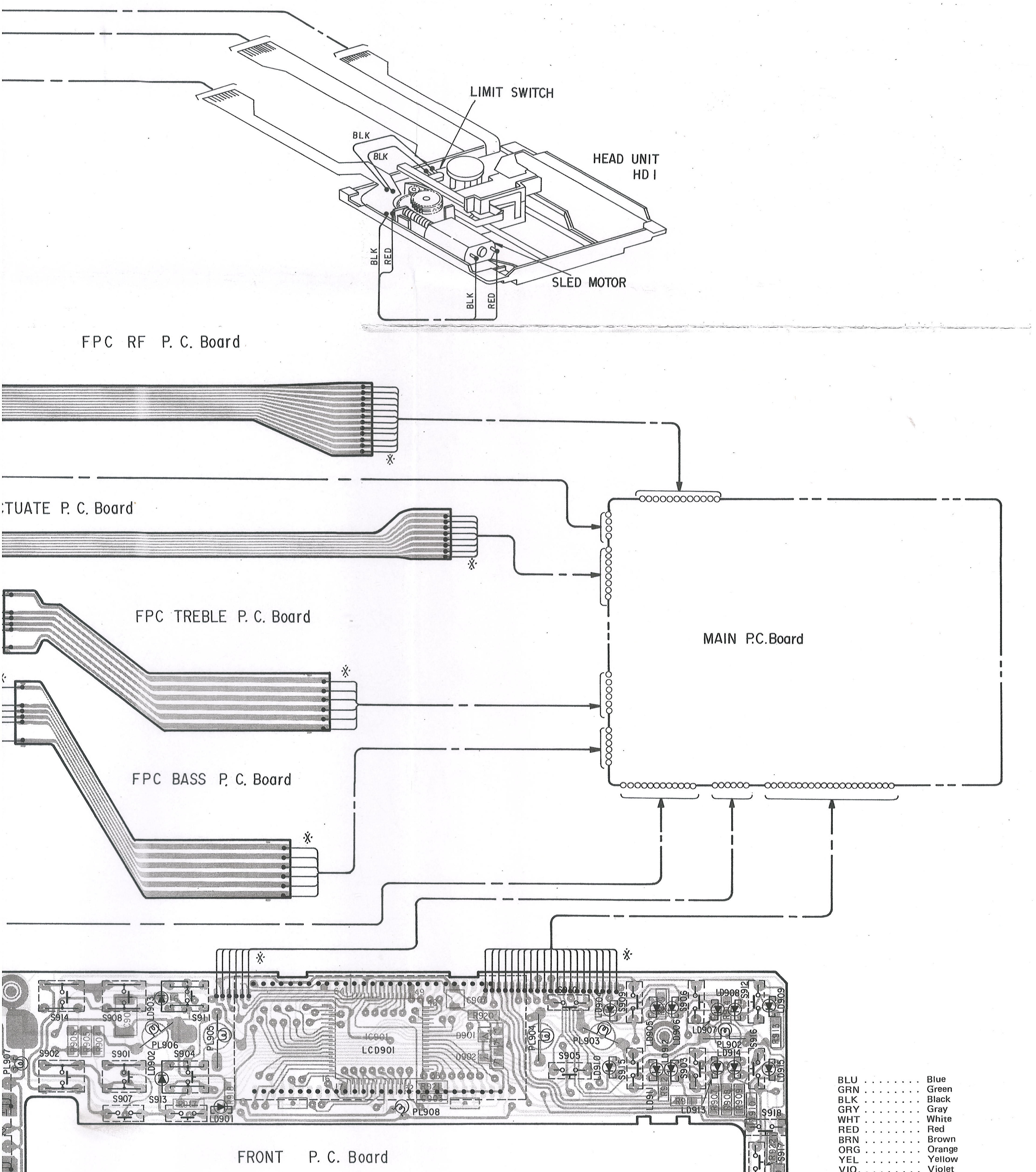

※
VR301
RF AMP P. C. Board
C312
CB301
Q301
IC302
CB209
D301
C315
C316
C314
C317
IC301
C304
C305
C302
C301
D303
D302
CB302
Q207
Q208
Q204
Q203
VR302
IC201
Q201
Q202
Q206
Q205
CB210
C201
FPC RF P.
PHOTO P. C. Board (B)
FPC ACTUATE P. C. Board
RED
BRN
R652
D650
PT660
YEL
BLK
FPC
SWITCH (DOOR)
P. C. Board
VIO
BLU
S650
WHT
GRY
Q654
Q653
Q656
R648
Q660
Q650
ZD650
Q657
C650
SWITCH (END)
P. C. Board
S651
LOAD P. C. Board
FPC
PT662
PHOTO P. C. Board (A)
SWITCH
SOLENOID
SD650
LOAD MOTOR M650
PL907
PL901
VR401-2
VR401-1
VR402-2
VR402-1
S914
S908
S902
S901
S907
S913
D903
D902
PL906
R903
R902
R901
R906
R905
R904


LIMIT SWITCH
HEAD UNIT
HD I
BLK
BLK
BLK
RED
SLED MOTOR
BLK
RED
FPC RF P. C. Board
TE P. C. Board
FPC TREBLE P. C. Board
MAIN P.C.Board
FPC BASS P. C. Board
FRONT P. C. Board
※
S914
S908
LD903
S911
S902
S901
PL906
S904
LD902
S907
S913
LD901
PL905
IC901
LCD901
D901
C907
R920
D902
PL908
PL904
S910
LD904
S909
S906
LD908
S912
LD909
PL903
S905
LD910
S915
LD905
LD906
LD907
PL902
LD914
S916
R913
LD911
LD912
S903
LD915
LD913
R911
S918
S917
LD916

BLU	Blue
GRN	Green
BLK	Black
GRY	Gray
WHT	White
RED	Red
BRN	Brown
ORG	Orange
YEL	Yellow
VIO.	Violet
PNK	Pink
GRN/WHT.	Green/White
GRY/WHT.	Gray/White
GRY/YEL.	Gray/Yellow
GRN/YEL.	Green/Yellow
SHLD.	Shield

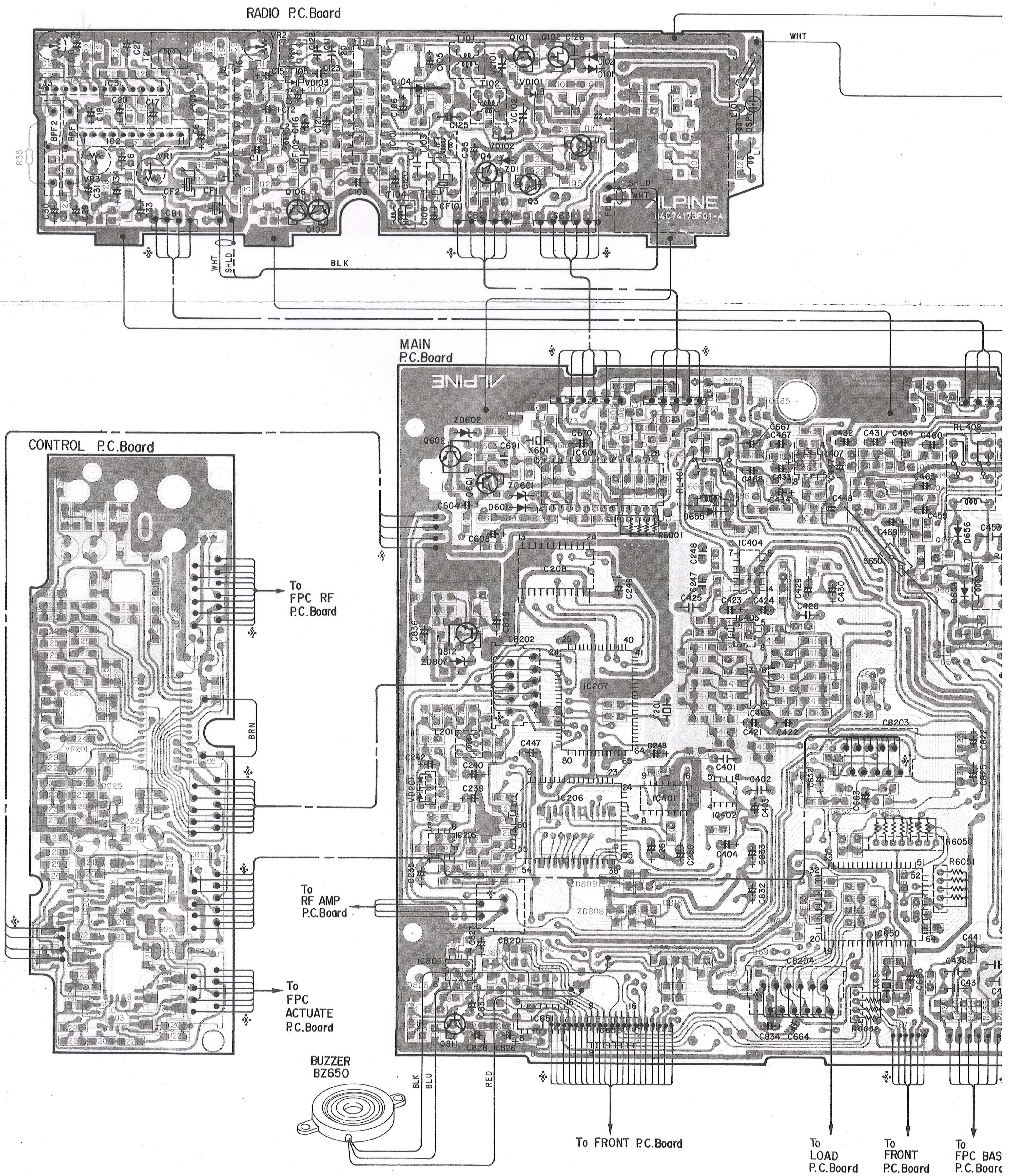
Parts Layout on P.C. Boards and Wiring Diagram ● (7902F model only)

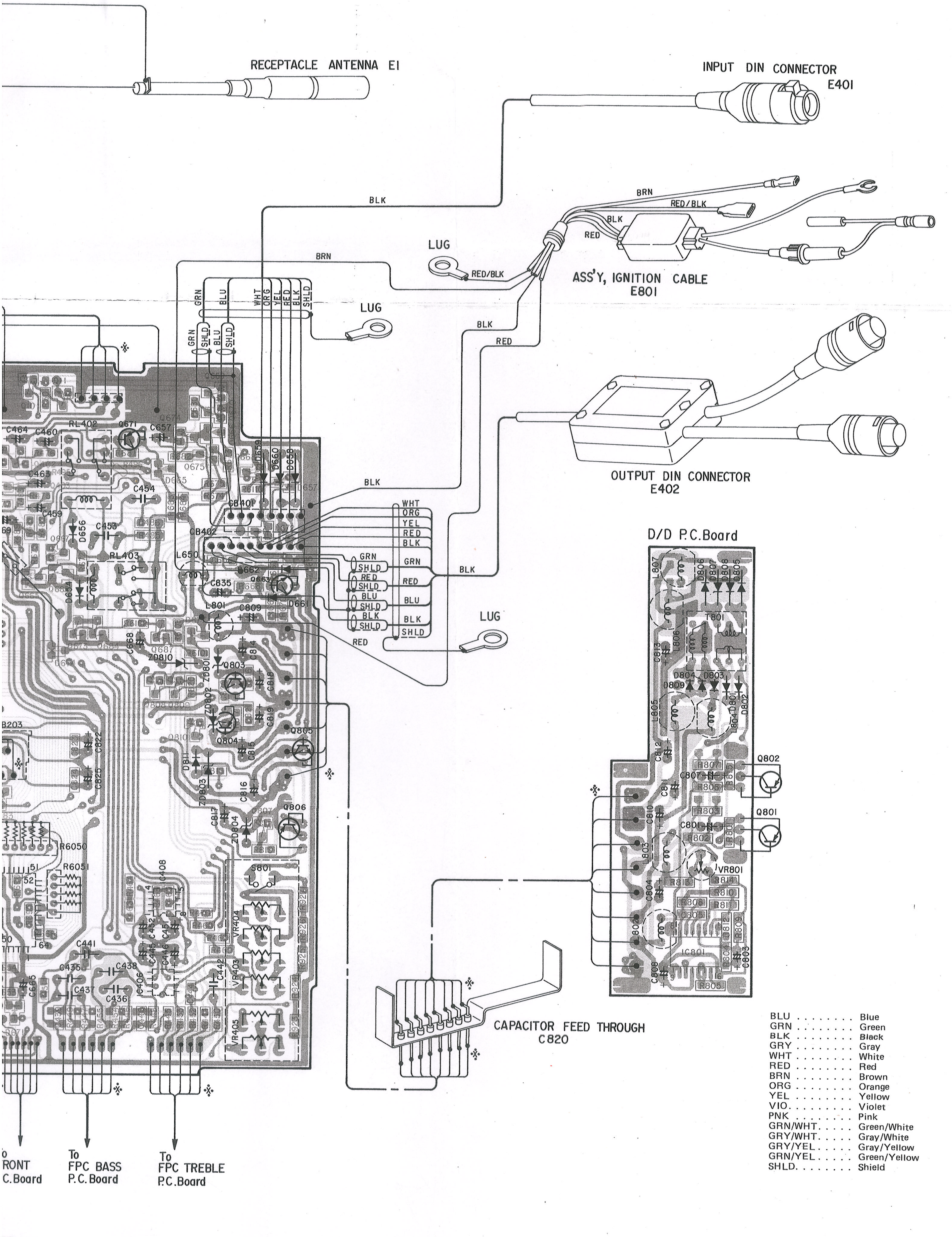

RF AMP P. C. Board
VR301
CB301
CB209
IC302
Q301
C312
C315
C316
C314
C317
IC301
C302
C304
C305
D301
D302
D303
CB302
VR302
Q207
Q208
Q204
Q203
IC201
C201
CB210
Q201
Q202
Q206
Q205
FPC
FPC ACTUATE P. C. Bo
PHOTO P.C.Board (B-1)
R652
D650
PHOTO P.C.Board (B-2)
PT660
DOOR SWITCH
P. C. Board
S650
VIO
BLU
WHT
GRY
END SWITCH
P. C. Board
LOAD P. C. Board
Q654
Q660
D659
Q650
Q657
YEL
RED
BRN
BLK
PHOTO P. C. Board (A)
PT662
SWITCH
SOLENOID
SD650
LOAD MOTOR M650
R901
S914
S902
VR401-2
VR401-1
VR402-2
VR402-1
PL907
PL901
※


LIMIT SWITCH
BLK
BLK
HEAD UNIT
HD I
BLK
RED
BLK
RED
SLED MOTOR
FPC RF P. C. Board
TUATE P. C. Board
FPC TREBLE P. C. Board
FPC BASS P. C. Board
MAIN P.C.Board
FRONT P. C. Board
※
S914
S908
D903
S911
S902
S901
PL906
S904
PL905
PL907
D902
S907
S913
LD901
IC901
LCD901
D901
D902
R920
PL908
PL904
S905
PL903
LD910
S915
S910
LD904
S909
LD905
LD906
S906
LD911
LD912
S903
LD908
S912
LD907
PL902
LD914
S916
LD909
LD913
LD915
S918
S917
LD916

BLU	Blue
GRN	Green
BLK	Black
GRY	Gray
WHT	White
RED	Red
BRN	Brown
ORG	Orange
YEL	Yellow
VIO.	Violet
PNK	Pink
GRN/WHT.	Green/White
GRY/WHT.	Gray/White
GRY/YEL.	Gray/Yellow
GRN/YEL.	Green/Yellow
SHLD.	Shield

Parts Layout on P.C. Boards and Wiring Diagram ● (7902F model only)

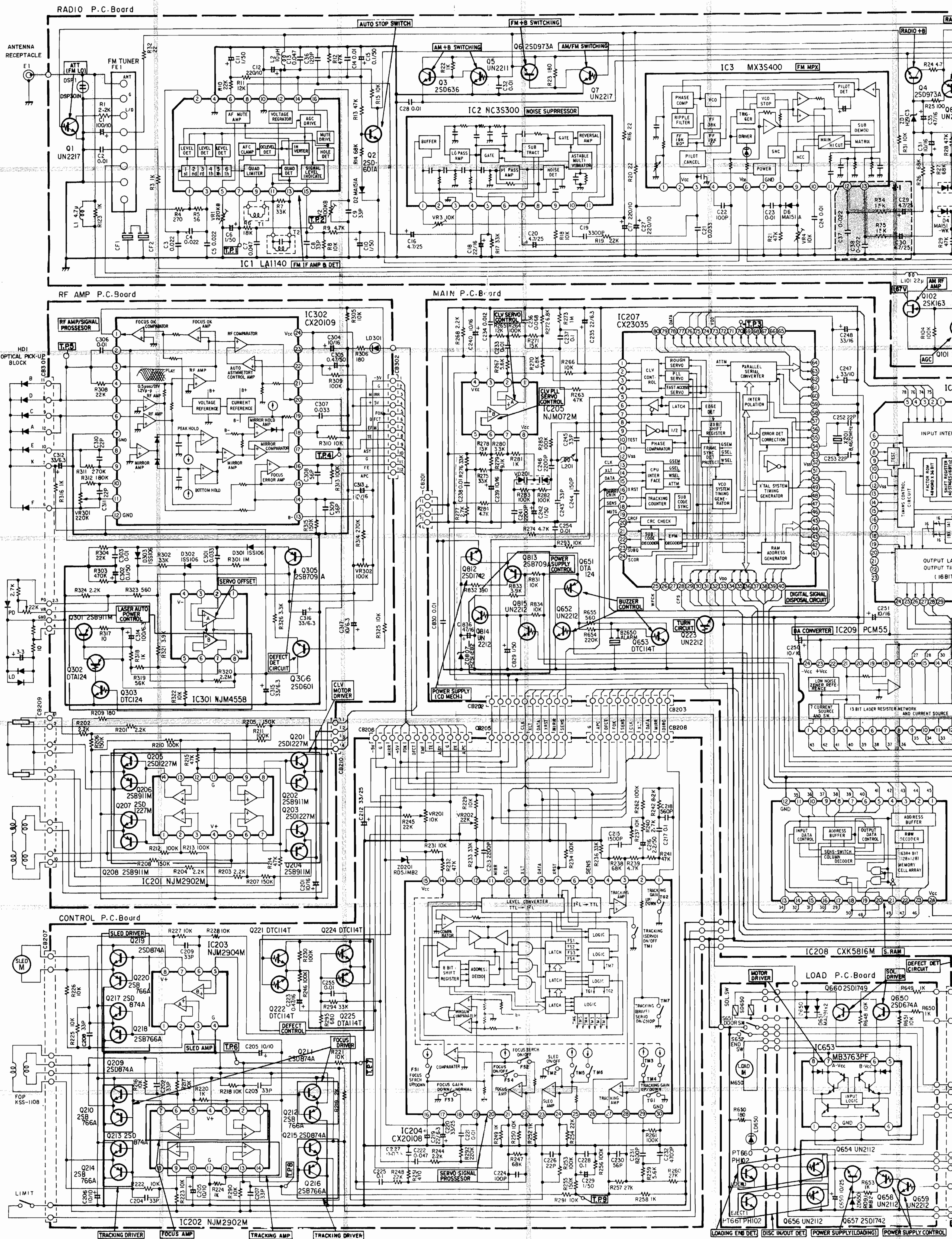

RADIO P.C.Board
ALPINE
84C74179F01-A
WHT
SHLD
BLK
MAIN
P.C.Board
CONTROL P.C.Board
To
FPC RF
P.C.Board
BRN
To
RF AMP
P.C.Board
To
FPC
ACTUATE
P.C.Board
BUZZER
BZ650
BLK
BLU
RED
To FRONT P.C.Board
To
LOAD
P.C.Board
To
FRONT
P.C.Board
To
FPC BAS
P.C.Boar
IC208
IC207
IC206
IC205
IC601
IC650
IC401
IC402
IC403
IC404
IC405
IC802
IC651
IC652
CB202
CB203
CB204
CB201
CB1
CB2
CB3
X601
X201
RL401
RL402
Q602
Q601
Q812
Q811
ZD602
ZD601
ZD807
D601
R6050
R6051
R6052
R6001
S650


RECEPTACLE ANTENNA E1
INPUT DIN CONNECTOR
E401
BLK
BRN
RED/BLK
BLK
RED
LUG
RED/BLK
ASS'Y, IGNITION CABLE
E801
GRN
BLU
WHT
ORG
YEL
RED
BLK
SHLD
LUG
GRN
SHLD
BLU
SHLD
BLK
RED
OUTPUT DIN CONNECTOR
E402
BLK
WHT
ORG
YEL
RED
BLK
GRN
SHLD
RED
SHLD
BLU
SHLD
BLK
SHLD
GRN
RED
BLU
BLK
SHLD
BLK
LUG
RED
D/D P.C.Board
CAPACITOR FEED THROUGH
C820
Q802
Q801
VR801
T801
IC801
RL402
RL403
Q671
C657
C464
C460
C463
C459
C454
C453
D656
CB401
CB402
L650
C835
L801
C809
Q803
Q804
Q805
Q806
ZD810
S601
VR404
VR403
VR405
C441
C438
C435
C437
C436
R6050
R6051
B203
C822
C825
o
RONT
C.Board
To
FPC BASS
P.C.Board
To
FPC TREBLE
P.C.Board

BLU	Blue
GRN	Green
BLK	Black
GRY	Gray
WHT	White
RED	Red
BRN	Brown
ORG	Orange
YEL	Yellow
VIO.	Violet
PNK	Pink
GRN/WHT.	Green/White
GRY/WHT.	Gray/White
GRY/YEL	Gray/Yellow
GRN/YEL	Green/Yellow
SHLD.	Shield

Schematic Diagram

IC	IC201 IC203 IC202 IC302 IC301 IC1 IC205 IC204 IC2 IC207 IC3 IC209 IC208 IC653 IC206
Transistor (Q)	Q1 Q301,Q302,Q303 Q219,Q220,Q217,Q218 Q209,Q210,Q213,Q214 Q205,Q206,Q207,Q208 Q305,Q306 Q201,Q202,Q203,Q204 Q221,Q222 Q224,Q225 Q211 ,Q212,Q215,Q216 Q2 Q3 Q5 Q812,Q814 Q6 Q813,Q815 Q7 Q651,Q652 Q653 Q223 PT660 PT661 Q654 Q656 Q660 Q657 Q4 Q102 Q650 Q658 Q659
Diode (D,LD,ZD,VD)	D303 D302 D301 D2 LD301 ZD201 ZD807 VD201 D6 LD650 D650 D651 ZD650 ZD1


RADIO P.C.Board
ANTENNA RECEPTACLE
E1
ATT (FM LO)
FM TUNER FE1
Q1 UN2217
AUTO STOP SWITCH
AM +B SWITCHING
FM +B SWITCHING
AM/FM SWITCHING
Q5 UN2211
Q6 2SD973A
Q7 UN2217
Q3 2SD636
Q2 2SD601A
IC1 LA1140 FM IF AMP & DET.
IC2 NC3S300 NOISE SUPPRESSOR
IC3 MX3S400 FM MPX
RADIO +B
Q4 2SD973A
RF AMP P.C.Board
HD1 OPTICAL PICK-UP BLOCK
RF AMP/SIGNAL PROSSESOR
IC302 CX20109
SERVO OFFSET
LASER AUTO POWER CONTROL
Q301 2SB911M
Q302 DTA124
Q303 DTC124
Q305 2SB709A
Q306 2SD601
DEFECT DET CIRCUIT
IC301 NJM4558
CLV MOTOR DRIVER
Q201 2SD1227M
Q205 2SD1227M
Q206 2SB911M
Q207 2SD1227M
Q208 2SB911M
Q202 2SB911M
Q203 2SD1227M
Q204 2SB911M
IC201 NJM2902M
CONTROL P.C.Board
SLED DRIVER
Q219 2SD874A
IC203 NJM2904M
Q220 2SB766A
Q217 2SD874A
Q218 2SB766A
SLED AMP
Q221 DTC114T
Q224 DTC114T
Q222 DTC114T
Q225 DTA114T
DEFECT CONTROL
FOCUS DRIVER
Q211 2SD874A
Q209 2SD874A
Q210 2SB766A
Q212 2SB766A
Q213 2SD874A
Q215 2SD874A
Q214 2SB766A
Q216 2SB766A
IC202 NJM2902M
TRACKING DRIVER
FOCUS AMP
TRACKING AMP
TRACKING DRIVER
LIMIT
FOP KSS-1108
MAIN P.C.Board
CLV SERVO CONTROL
IC205 NJM072M
CLV PLL SERVO CONTROL
IC207 CX23035
DIGITAL SIGNAL DISPOSAL CIRCUIT
POWER SUPPLY CONTROL
Q812 2SD1742
Q813 2SB709A
Q814 UN2212
Q815 UN2212
Q651 DTA124
Q652 UN2212
Q653 DTC114T
BUZZER CONTROL
TURN CIRCUIT
Q223 UN2212
POWER SUPPLY (CD MECH.)
IC204 CX20108
SERVO SIGNAL PROSSESOR
DA CONVERTER
IC209 PCM55
IC208 CXK5816M S.RAM
LOAD P.C.Board
MOTOR DRIVER
Q660 2SD1749
Q650 2SD674A
IC653 MB3763PF
M650
PT660 PH102
PT661 PH102
Q654 UN2112
Q656 UN2112
Q657 2SD1742
Q658 UN2112
Q659 UN2212
LOADING END DET.
DISC IN/OUT DET.
POWER SUPPLY(LOADING)
POWER SUPPLY CONTROL
DEFECT DET CIRCUIT
Q102 2SK163
AM RF AMP

IC1

1	2	3	4	5	6	7	8
2.51V (PS)	2.51V (PS)	2.51V (PS)	0V	2.11V	0V	4.97V (PS)	PS
9	10	11	12	13	14	15	16
4.81V (PS)	0V	4.81V (PS)	8.62V	4.82V	0V	5.12V	0V

IC2

1	2	3	4	5	6	7	8	9	10	11
PS	2.79V	0V	PS	0V	PS	PS	8.37V	0V	4.65V	PS

IC3

1	2	3	4	5	6	7	8	9	10	11	12	13
PS	8.14V	0.76V	3.23V	PS	0V	0V	1.45V	1.88V	PS	PS	PS	PS

IC101

1	2	3	4	5	6	7	8	9	10
2.32V	2V	0.83V	0.91V	0V	2.06V	PS	7.9V	0.32V	0.57V
11	12	13	14	15	16	17	18	19	20
0.68V	0V	PS	8.57V	1.29V	7.33V	3.07V	5.74V	PS	PS

IC201

1	2	3	4	5	6	7	8	9	10	11	12	13	14
PS	PS	5.2V	10.4V	PS	PS	PS	PS	PS	PS	0V	5.21V	PS	PS

IC202

1	2	3	4	5	6	7
PS	2.58V (PS)	2.58V	10.2V	5.14V	5.14V (PS)	PS
8	9	10	11	12	13	14
PS	PS	5.13V	0V	2.59V	PS	PS

IC203

1	2	3	4	5	6	7	8
PS	5.16V	5.15V	0V	2.59V	2.59V	PS	10.23V

IC901

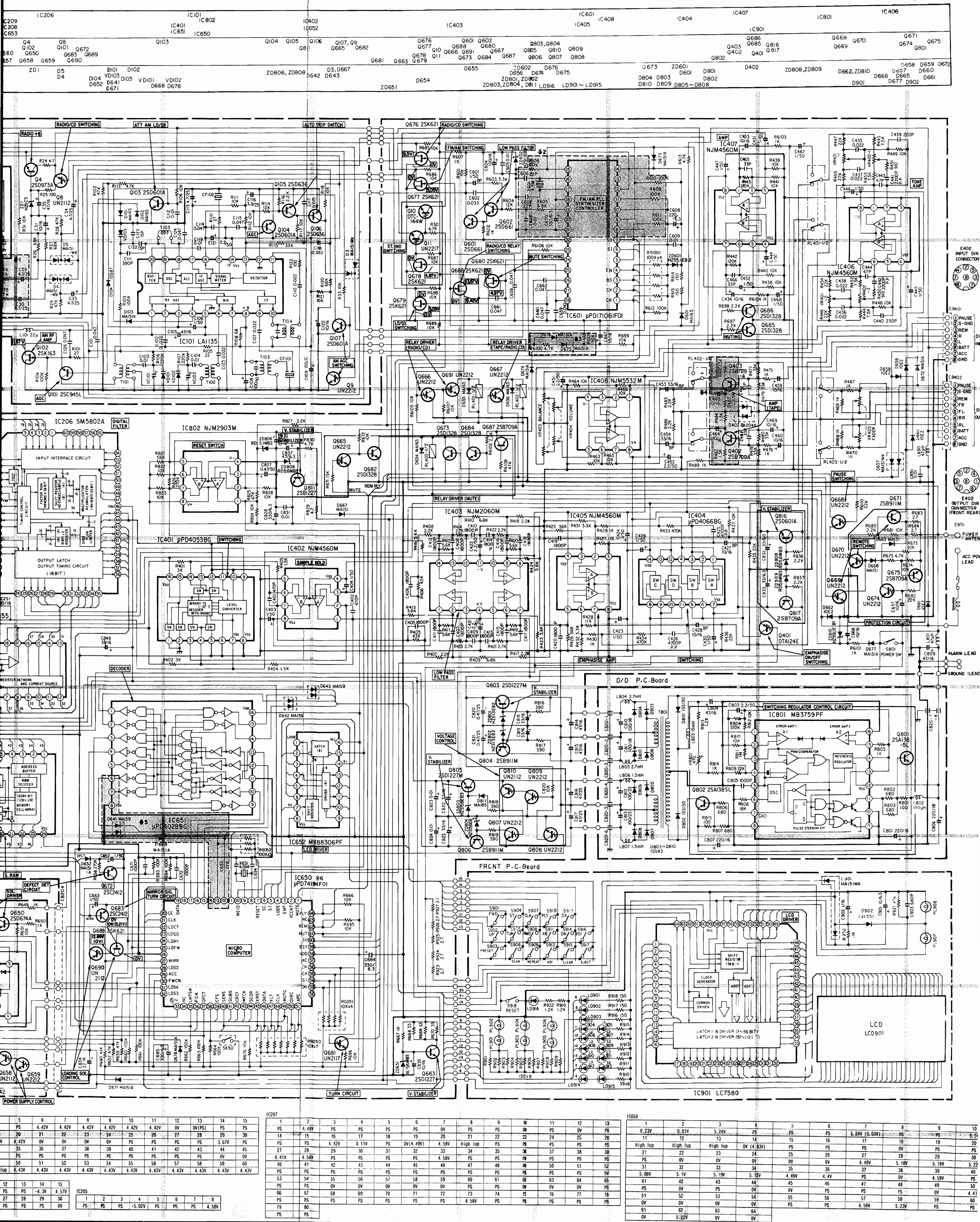
1~42	43	44~46
PS	5V	PS

IC204

1	2	3	4	5	6	7	8	9	10	11	12	13	14
PS	PS	PS	PS	PS	0.11V	4.41V	PS	PS	PS	0V	PS	PS	-4.3V
16	17	18	19	20	21	22	23	24	25	26	27	28	29
0.2V	-5.02V	0V	PS	PS	PS	PS	0V	PS	PS	4.43V	PS	PS	PS

IC206

1	2	3	4	5	6
4.42V	PS	PS	PS	PS	4.42V
16	17	18	19	20	21
4.42V	0V	4.41V	4.41V	4.42V	0V
31	32	33	34	35	36
PS	PS	PS	PS	PS	PS
46	47	48	49	50	51
4.59V	4.43V	4.43V	High lup	4.43V	4.43V


RADIO/CD SWITCHING
ATT AM LO/DX
AUTO STOP SWITCH
IC101 LA1135
IC206 SM5802A
DIGITAL FILTER
INPUT INTERFACE CIRCUIT
OUTPUT LATCH OUTPUT TIMING CIRCUIT (16BIT)
IC802 NJM2903M
RESET SWITCH
IC401 μPD4053BG
IC402 NJM4560M
SAMPLE HOLD
DECODER
IC651 μPD4028BG
IC652 MB88306PF
LED DRIVER
IC650 μPD7418F01
MICRO COMPUTER
MIRROR SIG. TURN CIRCUIT
LOADING SOL CONTROL
POWER SUPPLY CONTROL
TURN CIRCUIT
V. STABILIZER
FM/AM SWITCHING
LOW PASS FILTER
FM/AM PLL SYNTHESIZER CONTROLLER
IC601 μPD1706IF01
RADIO/CD RELAY SWITCHING
MUTE SWITCHING
RELAY DRIVER (RADIO/CD)
RELAY DRIVER (TAPE/RADIO,CD)
RELAY DRIVER (MUTE)
IC403 NJM2060M
IC405 NJM4560M
IC404 μPD4066BG
IC408 NJM5532M
IC407 NJM4560M
IC406 NJM4560M
TONE AMP
MUTING
AMP (TAPE)
REMOTE SWITCHING
PROTECTION CIRCUIT
EMPHASISE ON/OFF SWITCHING
EMPHASISE AMP
SWITCHING
LOW PASS FILTER
D/D P.C.Board
IC801 MB3759PF
SWITCHING REGULATOR CONTROL CIRCUIT
VOLTAGE CONTROL
FRONT P.C.Board
LCD DRIVER
IC901 LC7580
LCD LCD901
E402 INPUT DIN CONNECTOR
E402 OUTPUT DIN CONNECTOR (FRONT, REAR)
POWER ANTENNA
ACC POWER LEAD
ALARM LEAD
GROUND LEAD

	5	6	7	8	9	10	11	12	13	14	15
	PS	4.42V	4.42V	4.42V	4.42V	4.42V	4.42V	0V	0V(PS)	PS	PS
	20	21	22	23	24	25	26	27	28	29	30
V	4.42V	0V	0V	0V	0V	PS	PS	PS	PS	3.67V	PS
	35	36	37	38	39	40	41	42	43	44	45
	PS	PS	PS	PS	PS	PS	PS	PS	PS	0V	0V
	50	51	52	53	54	55	56	57	58	59	60
lup	4.43V	4.43V	4.43V	4.43V	4.43V	4.43V	4.43V	4.43V	4.43V	4.43V	4.43V

12	13	14	15
PS	PS	-4.3V	4.57V
27	28	29	30
PS	PS	PS	0V

IC205

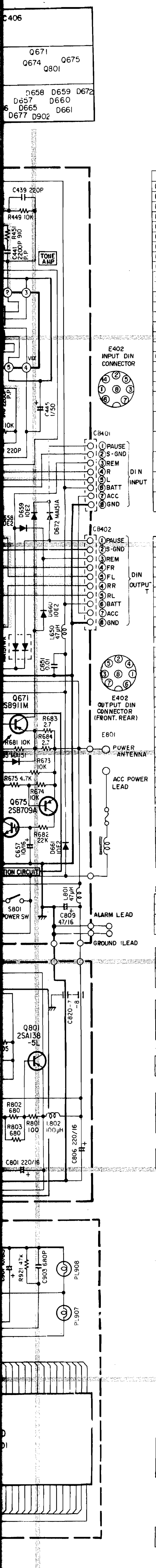
1	2	3	4	5	6	7	8
PS	PS	PS	-5.02V	PS	PS	PS	4.58V

IC207

1	2	3	4	5	6	7	8	9	10	11	12	13
PS	4.48V	PS	PS	PS	PS	0V	PS	PS	0V	PS	0V	PS
14	15	16	17	18	19	20	21	22	23	24	25	26
PS	PS	4.42V	0.11V	PS	0V(4.49V)	4.58V	High lup	PS	PS	PS	PS	PS
27	28	29	30	31	32	33	34	35	36	37	38	39
0.41V	4.58V	PS	PS	PS	PS	4.58V	PS	PS	PS	PS	PS	PS
40	41	42	43	44	45	46	47	48	49	50	51	52
PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	0V
53	54	55	56	57	58	59	60	61	62	63	64	65
PS	PS	0V	0V	0V	0V	0V	PS	PS	0V	0V	0V	PS
66	67	68	69	70	71	72	73	74	75	76	77	78
PS	PS	PS	PS	PS	PS	PS	4.58V	PS	PS	PS	PS	PS
79	80											
PS	PS											

IC650

1	2	3	4	5	6	7	8	9	10
0.23V	0.01V	5.24V	PS	PS	PS	5.24V (0.03V)	PS	PS	5.2
11	12	13	14	15	16	17	18	19	20
High lup	High lup	High lup	0V (4.83V)	PS	PS	PS	0V	PS	PS
21	22	23	24	25	26	27	28	29	30
PS	0V	0V	0V	0V	0V	4.48V	5.18V	5.18V	5.22
31	32	33	34	35	36	37	38	39	40
5.06V	5.1V	5.19V	5.15V	4.46V	4.4V	PS	0V	4.58V	PS
41	42	43	44	45	46	47	48	49	50
PS	0V	PS	0V	0V	PS	PS	PS	0V	4.41
51	52	53	54	55	56	57	58	59	60
0V	0V	0V	0V	PS	PS	4.56V	5.23V	PS	PS
61	62	63	64						
0V	5.22V	0V	0V						


C406
Q671
Q674
Q675
Q801
D658 D659 D672
D657 D660
D665 D661
D677 D902
C439 220P
R449 10K
TONE AMP
E402
INPUT DIN CONNECTOR
CB401
①PAUSE
②S-GND
③REM
④R
⑤L
⑥BATT
⑦ACC
⑧GND
DIN INPUT
CB402
①PAUSE
②S-GND
③REM
④FR
⑤FL
⑥RR
⑦RL
⑧BATT
⑨ACC
⑩GND
DIN OUTPUT
E402
OUTPUT DIN CONNECTOR (FRONT, REAR)
E801
POWER ANTENNA
ACC POWER LEAD
ALARM LEAD
GROUND LEAD
Q671 2SB911M
Q675 2SB709A
S801 POWER SW
C809 47/16
L801
Q801 2SA1389-5L
R802 680
R803 680
R801 100
L802 100μH
C806 220/16
C801 220/16
R921 47K
C903 680P
PL908
PL907
ION CIRCUIT

	E	C	B
Q201	PS	10.32V	PS
Q202		0V	PS
Q203	PS	10.28V	PS
Q204	PS	0V	PS
Q205	0V	10.35V	PS
Q206	0V	0V	PS
Q207		10.38V	PS
Q208		0V	PS
Q1	0V	0V	0V
Q2	0V	6.1V	0V
Q3	0V	0V	0V
Q5	0V	0V	0V
Q6	0V	13.62V	0V
Q7	0V	0V	13.48V
Q4	9.4V	13.23V	10V
Q8	13.67V	13.45V	1
Q305	PS	-5.09V	PS
Q306	4.55V	3.82V	4.41V
Q301	3.96V	2.37V	3.32V
Q302	4.57V	3.32V	4.55V
Q303	0V	4.55V	0V
Q209 Q210	PS		PS
Q211 Q212	PS		PS
Q213 Q214	PS		PS
Q215 Q216	PS		PS
Q217 Q218	PS		PS
Q219 Q220	PS		PS

	E	C	B
Q221	0V	PS	-3.66V(PS)
Q224 Q225	0V	PS	PS
Q222	0V	PS	(-3.65V)PS
Q812	10.24V(0V)	13.48V(13.58V)	10.88V(0V)
Q813	13.48V(13.58V)		(13.56V)12.65V
Q814	0V	0.02V(13.55V)	8.75V(0.02V)
Q815	0V	8.75V(0.02V)	0.01V(5.16V)
Q650	0V	12.99V(0.99V)	0V(0.82V)
Q660	0V	(1.07V)13V	0V(1.74V)
Q654	5.13V		(0.11V)5.1V
Q656	(1.35V)5.23V		5.2V(0.12V)
Q651	13.39V	0V	13.32V
Q652	0V	13.32V	0V
Q653	0V	0V	0V
Q657	(7.28V)0V	(12.62V)12.97V	0.08V(7.92V)
Q658	(12.62V)12.97V	0V	(0.03V)12.9V
Q659		(0.03V)12.9V	0V(5.2V)
Q690	12.97V	(12.53V)0V	(0V)12.89V
Q672	0V	4.46V	0V
Q683	0V	4.48V	0V
Q103	0V	0V	0.48V
Q104		3.57V	6.77V
Q105		0.01V	0.65V
Q106		0.17V	0.01V
Q101	1.67V	3.3V	2.32V
Q10	0V	0V	12.3V
Q11	0V	12.27V	0V
Q107	0V	0V	0.09V
Q9	0V	0.38V	0V
Q816	5.2V	12.39V	5.84V
Q401	5.22V	5.23V	-5.21V
Q817	-5.19V	-12.43V	-5.84V
Q602	0.58V		

	E	C	B
Q601	0V	3.47V	0.58V
Q681	PS	PS	PS
Q811	5.23V	12.95V	5.82V
Q663	5.18V	13.22V	5.79V
Q685	0V	0V	0V
Q686	0V	0V	0V
Q403	5.33V	2.98V	4.7V
Q402	5.33V	2.98V	4.7V
Q671	13.53V	13.53V	12.86V
Q670	0V	0.03V	9.3V
Q675	13.54V	0V	13.53V
Q674	0V	13.5V	0V
Q668	0V	5.23V	0V
Q669	0V	9.3V	0.02V
Q667	0V	13.55V	0V
Q691	0V	13.48V	0V
Q666	0V	0V	9.42V
Q687	8.4V	0V	13.47V
Q684	0V	0V	0V
Q673	0V	0V	0V
Q682	0V	0V	0.68V
Q665	0V	0.68V	2.37V
Q803	12.41V	13.57V	13V
Q804	-12.44V	-13.59V	
Q801	13.44V	0V	13.26V
Q805	4.6V	6.23V	
Q806	-5.02V	-6.65V	
Q810	6.23V	6.21V	0V
Q809	0V	0V	8.67V
Q807	-6.65V	-6.63V	6.2V
Q808	0V	8.67V	0.01V
Q802	13.42V	0V	13.23V

Measuring Condition

1. Power supply voltage ; DC 14 V
2. Measuring meter : Oscilloscope with multimeter (input resistance 10MΩ)
3. Measuring point reference ; Between ground
4. Measurement condition : Signals applied as follows
   - In CD measurement 2nd program (1KHz Sinewave) of YEDS-18 was played back in repeat mode
   - In FM measurement 98.1MHz Ff=1K fmod=75K Dev is being applied to 50Ω/50Ω dummy
   - In AM measurement 1000KHz Ff=400Hz fmod 30% signal is being applied to JIS dummy

Volume---Max Position

Balance/Fader/Treble/Bass ...Mech Center

Note: When replacing any of varactor diodes VD101~VD103, always use one with the same rank.

IC208

1	2	3	4	5	6	7	8	9	10	11	12
PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	0V
13	14	15	16	17	18	19	20	21	22	23	24
PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	4.58V

IC209

1	2	3	4	5	6	7	8	9	10	11	12
PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS	PS
13	14	15	16	17	18	19	20	21	22	23	24
PS	PS	PS	PS	PS	PS	0V	0V	0V	0V	5.21V	-5.21V

IC302

1	2	3	4	5	6	7	8	9	10	11	12
4.42V	0.01V	0V	0.01V	0.01V	0.01V	0.01V	0.01V	-0.72V	-0.71V	0.02V	0.02V
13	14	15	16	17	18	19	20	21	22	23	24
-5.03V	-0.12V	-0.12V	0.02V	0.07V	0.01V	0.04V	PS	4.58V	2.3V	4.57V	4.56V

IC301

1	2	3	4	5	6	7	8
-3.72V	1.77V	1.67V	-5.03V	-3.29V	-3.29V	3.13V	4.37V

IC401

1	2	3	4	5	6	7	8
0V	0V	0V	0V	0V	0V	-5.22V	0V
9	10	11	12	13	14	15	16
PS	0V	PS	0V	0V	0V	0V	5.23V

IC402

1	2	3	4	5	6	7	8
PS	0V	0V	-12.47V	0V	0V	PS	12.45V

IC403

1	2	3	4	5	6	7
PS	PS	PS	12.46V	PS	PS	PS
8	9	10	11	12	13	14
PS	PS	PS	-12.48V	PS	PS	PS

IC405

1	2	3	4	5	6	7	8
PS	PS	PS	-12.5V	PS	PS	PS	12.48V

IC404

1	2	3	4	5	6	7
PS	PS	PS	PS	-5.23V	-5.23V	-5.24V
8	9	10	11	12	13	14
PS	PS	PS	PS	-5.23V	-5.23V	5.25V

IC406

1	2	3	4	5	6	7	8
PS	0V	0V	-12.57V	0V	0V	PS	12.54V

IC407

1	2	3	4	5	6	7	8
0V	0V	0V	-12.54V	0V	0V	0V	12.52V

IC408

1	2	3	4	5	6	7	8
PS	PS	PS	-12.54V	PS	PS	PS	12.57V

IC601

1	2	3	4	5	6	7	8	9	10	11	12	13	14
3.54V	PS	PS	PS	0V	0V	PS	5.59V	0V	0V	2.46V	4.98V	0V	4.98V
15	16	17	18	19	20	21	22	23	24	25	26	27	28
5.2V	PS	PS	4.98V	PS	PS	0V	PS	0V	4.97V	4.97V	4.98V	4.98V	4.97V

IC651

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PS	PS	PS	PS	0V	PS	PS	0V	0V	PS	0V	PS	PS	PS	PS	5.22V

IC652

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PS	PS	5.22V	5.22V	5.22V	5.22V	PS	0V	0V	5.22V	0.43V	5.22V	5.22V	PS	5.22V	5.22V

IC653

1	2	3	4	5	6	7	8
0V (5.14V)	0V (0.04V)	0V (0.04V)	0V (5.14V)	0.17V (6.53V)	0V (7.24V)	0V (7.23V)	0.2V(1.26V)

IC801

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2.56V	2.56V	3.14V	0.22V	PS	3.78V	0V	11.97V	0V	0V	PS	13.48V	5.1V	5.1V	5.1V	0V

IC802

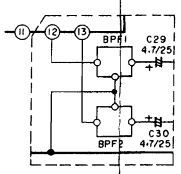
1	2	3	4	5	6	7	8
5.19V	2.61V	4.99V	0V	5.21V	2.61V	5.22V	5.23V

8	9	10
PS	PS	5.24V
18	19	20
0V	PS	PS
28	29	30
5.18V	5.18V	5.22V
38	39	40
0V	4.58V	PS
48	49	50
PS	0V	4.41V
58	59	60
5.23V	PS	PS

NOTES:

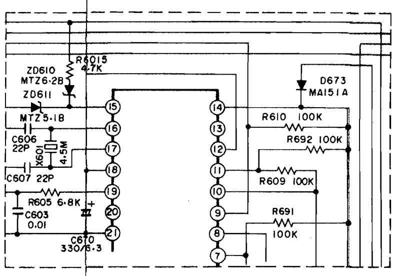
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$

※1 7902E model only (■)
7902F model only (▲)

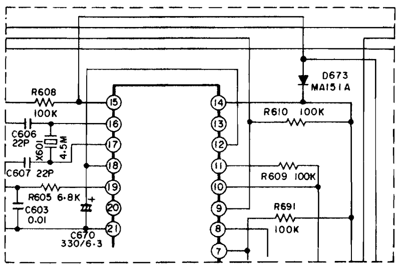

⑪
⑫
⑬
BPF1
C29 4.7/25
BPF2
C30 4.7/25

	C37	C38	R34	R35	BPF1	BPF2
●	○	○	○	○	×	×
■▲	×	×	×	×	○	○

※2 7902F model only (▲)


R6015 4.7K
ZD610 MTZ6.2B
ZD611 MTZ5.1B
C606 22P
X601 4.5M
C607 22P
R605 6.8K
C603 0.01
C670 330/6.3
D673 MA151A
R610 100K
R692 100K
R609 100K
R691 100K
⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑

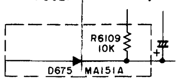
※2 7902E model only (■)


R608 100K
C606 22P
X601 4.5M
C607 22P
R605 6.8K
C603 0.01
C670 330/6.3
D673 MA151A
R610 100K
R609 100K
R691 100K
⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑

	R608	R611	R691	R692	R6015	ZD610	ZD611
●	○	○	×	×	×	×	×
■	○	×	○	×	×	×	×
▲	×	×	○	○	○	○	○

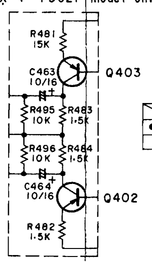
●: 7902 model only
■: 7902E model only
▲: 7902F model only
Others : Common

※3 7902F model only (▲)


R6109 10K
D675 MA151A

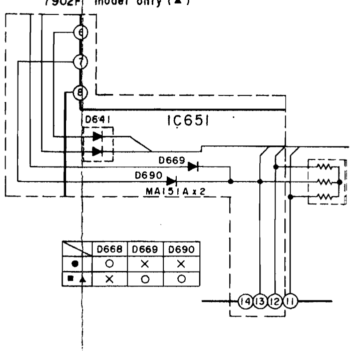
	R676	R6100
●■	○	○
▲	×	×

※4 7902F model only (▲)


R481 15K
C463 10/16
Q403
R495 10K
R483 1.5K
R496 10K
R484 1.5K
C464 10/16
Q402
R482 1.5K

	R495	R496
●■	×	×
▲	○	○

※5 7902E European model only (■)
7902F model only (▲)


⑥
⑦
⑧
D641
IC651
D669
D690
MA151A×2
⑭⑬⑫⑪

	D668	D669	D690
●	○	×	×
■▲	×	○	○

※6 7902F model only (▲)

	IC650
●■	74184F01
▲	74184F03

C	B
10.32V	PS
0V	PS
10.28V	PS
0V	PS
10.35V	PS
0V	PS
10.38V	PS
0V	PS
0V	0V
6.1V	0V
0V	0V
0V	0V
13.62V	0V
0V	13.48V
13.23V	10V
13.45V	1
-5.09V	PS
3.82V	4.41V
2.37V	3.32V
3.32V	4.55V
4.55V	0V
	PS
	PS
	PS
	PS
	PS
	PS

	E	C	B
Q221	0V	PS	-3.66V(PS)
Q224 Q225	0V	PS	PS
Q222	0V	PS	(-3.65V)PS
Q812	10.24V(0V)	13.48V(13.58V)	10.88V(0V)
Q813	13.48V(13.58V)		(13.56V)12.65V
Q814	0V	0.02V(13.55V)	8.75V(0.02V)
Q815	0V	8.75V(0.02V)	0.01V(5.16V)
Q650	0V	12.99V(0.99V)	0V(0.82V)
Q660	0V	(1.07V)13V	0V(1.74V)
Q654	5.13V		(0.11V)5.1V
Q656	(1.35V)5.23V		5.2V(0.12V)
Q651	13.39V	0V	13.32V
Q652	0V	13.32V	0V
Q653	0V	0V	0V
Q657	(7.28V)0V	(12.62V)12.97V	0.08V(7.92V)
Q658	(12.62V)12.97V	0V	(0.03V)12.9V
Q659		(0.03V)12.9V	0V(5.2V)
Q690	12.97V	(12.53V)0V	(0V)12.89V
Q672	0V	4.46V	0V
Q683	0V	4.48V	0V
Q103	0V	0V	0.48V
Q104		3.57V	6.77V
Q105		0.01V	0.65V
Q106		0.17V	0.01V
Q101	1.67V	3.3V	2.32V
Q10	0V	0V	12.3V
Q11	0V	12.27V	0V
Q107	0V	0V	0.09V
Q9	0V	0.38V	0V
Q816	5.2V	12.39V	5.84V
Q401	5.22V	5.23V	-5.21V
Q817	-5.19V	-12.43V	-5.84V
Q602	0.58V		

C	B
3.47V	0.58V
PS	PS
12.95V	5.82V
13.22V	5.79V
0V	0V
0V	0V
2.98V	4.7V
2.98V	4.7V
13.53V	12.86V
0.03V	9.3V
0V	13.53V
13.5V	0V
5.23V	0V
9.3V	0.02V
13.55V	0V
13.48V	0V
0V	9.42V
0V	13.47V
0V	0V
0V	0V
0V	0.68V
0.68V	2.37V
13.57V	13V
-13.59V	
0V	13.26V
6.23V	
-6.65V	
6.21V	0V
0V	8.67V
-6.63V	6.2V
8.67V	0.01V
0V	13.23V

Measuring Condition

1. Power supply voltage ; DC 14 V
2. Measuring meter ; Oscilloscope with multimeter (input resistance 10MΩ)
3. Measuring point reference ; Between ground
4. Measurement condition ; Signals applied as follows
   - •In CD measurement 2nd program (1 KHz Sinewave) of YEDS-18 was played back in repeat mode
   - •In FM measurement 98.1 MHz
Ff= 1 K fmod=75K Dev
is being applied to 50Ω/50Ω dummy
   - •In AM measurement 1000KHz
Ff=400Hz fmod 30% signal
is being applied to JIS dummy

3	4	5	6	7	8	9	10	11	12
PS	PS	PS	PS	PS	PS	PS	PS	PS	0V
15	16	17	18	19	20	21	22	23	24
PS	PS	PS	PS	PS	PS	PS	PS	PS	4.58V

Volume---Max Position

Balance/Fader/Treble/Bass ...Mech Center

3	4	5	6	7	8	9	10	11	12
PS	PS	PS	PS	PS	PS	PS	PS	PS	PS
15	16	17	18	19	20	21	22	23	24
PS	PS	PS	PS	0V	0V	0V	0V	5.21V	-5.21V

Note: When replacing any of varactor diodes VD101~VD103, always use one with the same rank.

3	4	5	6	7	8	9	10	11	12
0V	0.01V	0.01V	0.01V	0.01V	0.01V	-0.72V	-0.71V	0.02V	0.02V
15	16	17	18	19	20	21	22	23	24
-0.12V	0.02V	0.07V	0.01V	0.04V	PS	4.58V	2.3V	4.57V	4.56V

3	4	5	6	7	8
1.67V	-5.03V	-3.29V	-3.29V	3.13V	4.37V

3	4	5	6	7	8
0V	0V	0V	0V	-5.22V	0V
11	12	13	14	15	16
PS	0V	0V	0V	0V	5.23V

3	4	5	6	7	8
0V	-12.47V	0V	0V	PS	12.45V

3	4	5	6	7
PS	12.46V	PS	PS	PS
10	11	12	13	14
PS	-12.48V	PS	PS	PS

3	4	5	6	7	8
PS	-12.5V	PS	PS	PS	12.48V

3	4	5	6	7
PS	PS	-5.23V	-5.23V	-5.24V
10	11	12	13	14
PS	PS	-5.23V	-5.23V	5.25V

3	4	5	6	7	8
0V	-12.57V	0V	0V	PS	12.54V

3	4	5	6	7	8
0V	-12.54V	0V	0V	0V	12.52V

3	4	5	6	7	8
PS	-12.54V	PS	PS	PS	12.57V

3	4	5	6	7	8	9	10	11	12	13	14
PS	PS	0V	0V	PS	5.59V	0V	0V	2.46V	4.98V	0V	4.98V
17	18	19	20	21	22	23	24	25	26	27	28
PS	4.98V	PS	PS	0V	PS	0V	4.97V	4.97V	4.98V	4.98V	4.97V

3	4	5	6	7	8	9	10	11	12	13	14	15	16
PS	PS	0V	PS	PS	0V	0V	PS	0V	PS	PS	PS	PS	5.22V

3	4	5	6	7	8	9	10	11	12	13	14	15	16
5.22V	5.22V	5.22V	5.22V	PS	0V	0V	5.22V	0.43V	5.22V	5.22V	PS	5.22V	5.22V

2	3	4	5	6	7	8
0V (0.04V)	0V (0.04V)	0V (5.14V)	0.17V (6.53V)	0V (7.24V)	0V (7.23V)	0.2V(1.26V)

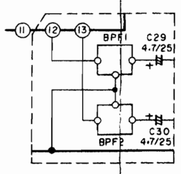
	3	4	5	6	7	8	9	10	11	12	13	14	15	16
6V	3.14V	0.22V	PS	3.78V	0V	11.97V	0V	0V	PS	13.48V	5.1V	5.1V	5.1V	0V

	3	4	5	6	7	8
1V	4.99V	0V	5.21V	2.61V	5.22V	5.23V

NOTES:

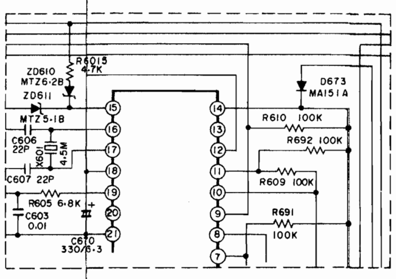
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$

※1 7902E model only (■)
7902F model only (▲)

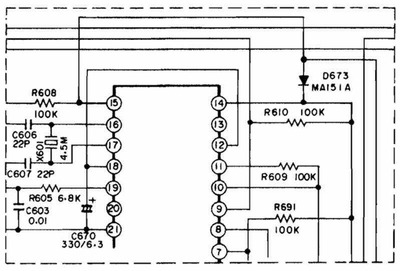

11
12
13
BPF1
C29
4.7/25
BPF2
C30
4.7/25

	C37	C38	R34	R35	BPF1	BPF2
●	○	○	○	○	×	×
■▲	×	×	×	×	○	○

※2 7902F model only (▲)


R6015
4.7K
ZD610
MTZ6.2B
ZD611
MTZ5.1B
C606
22P
X601
4.5M
C607 22P
R605 6.8K
C603
0.01
C670
330/6.3
D673
MA151A
R610 100K
R692 100K
R609 100K
R691
100K
15
16
17
18
19
20
21
14
13
12
11
10
9
8
7

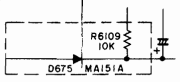
※2 7902E model only (■)


R608
100K
C606
22P
X601
4.5M
C607 22P
R605 6.8K
C603
0.01
C670
330/6.3
D673
MA151A
R610 100K
R609 100K
R691
100K
15
16
17
18
19
20
21
14
13
12
11
10
9
8
7

	R608	R611	R691	R692	R6015	ZD610	ZD611
●	○	○	×	×	×	×	×
■	○	×	○	×	×	×	×
▲	×	×	○	○	○	○	○

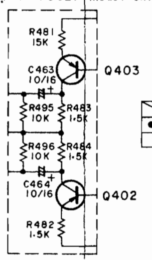
●: 7902 model only
■: 7902E model only
▲: 7902F model only
Others : Common

※3 7902F model only (▲)


R6109
10K
D675
MA151A

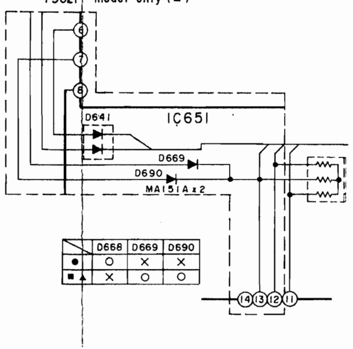
	R676	R6100
●■	○	○
▲	×	×

※4 7902F model only (▲)


R481
15K
C463
10/16
Q403
R495
10K
R483
1.5K
R496
10K
R484
1.5K
C464
10/16
Q402
R482
1.5K

	R495	R496
●■	×	×
▲	○	○

※5 7902E European model only (■)
7902F model only (▲)


6
7
8
D641
IC651
D669
D690
MA151A x 2
14
13
12
11

	D668	D669	D690
●	○	×	×
■▲	×	○	○

※6 7902F model only (▲)

	IC650
●■	74184F01
▲	74184F03

7902/7902E/7902F

Electrical Parts List

Resistors: Carbon resistors under ¼ watts are not mentioned in the parts list, please confirm them by schematic diagram.
uF = microfarads, pF = picofarads

Symbol No.	Part No.	Description
Radio P.C.Board		
IC's		
IC1	51S47809F01	LA1140
IC2	51T65184F01	NC3S300
IC3	51T65185F01	MX3S400
IC101	51T61066F01	LA1135
Transistors		
Q1	48T64222F07	Chip UN2217
Q2	48T52438F01	Chip 2SD601A
Q3	48S40627U01	2SD636
Q4	48T52549F01	2SD973A
Q5	48T64222F01	Chip UN2211
Q6	48T52549F01	2SD973A
Q7	48T64222F07	Chip UN2217
Q8	48T64221F02	Chip UN2112
Q9	48T64222F02	Chip UN2212
Q101	48S44578J01	2SC945L
Q102	48T53397F06	FET 2SK163
Q103	48T52438F01	Chip 2SD601A
Q104	48T52438F01	Chip 2SD601A
Q105	48S40627U01	2SD636
Q106	48S40627U01	2SD636
Q107	48T52438F01	Chip 2SD601A
Diodes		
D2	48T52444F01	Chip MA151A
D3	48T52446F01	Chip MA151WK
D4	48T52446F01	Chip MA151WK
D5	48T52446F01	Chip MA151WK
D6	48T52444F01	Chip MA151A
D101	48T44813F01	MA165TA
D102	48T44813F01	MA165TA
D103	48T65992F01	Chip MA151K
D104	48T70223F01	Shottkey 1SS87
VD101	48T41264F06	Varactor SVC321－B
VD102	48T41264F06	Varactor SVC321－B
VD103	48T41264F06	Varactor SVC321－B
ZD1	48T40150U99	Zener HZ9C－3
DSP1	48T70875F01	Protector DSP－301N

Symbol No.	Part No.	Description
Coils		
L1	24T51656F18	Inductor 4.7 μH
L2	24T51656F22	Inductor 10 μH
L101	24T51656F26	Inductor 22 μH
Transformers		
T1	24T67025F01	Coil Inductor (WHT)
T2	24T58377F02	Coil FM 7KL (BLU)
T101	24T63656F02	Coil AM (BLU)
T102	24T63655F01	Coil AM RF (WHT)
T103	24T61064F01	Coil IFT－1 (SFP) (ORG)
T104	24T61063F02	Coil IFT－2 (YEL)
T105	24T70014F01	Coil OSC (MW) (RED)
Filters		
● CF1	91T70350F01	Ceramic 1070NA10FAL
■ CF1	91T70350F01	Ceramic 1070NA10FAL
▲ CF1	91T80084F01	Ceramic 1070MS10FAL
● CF2	91T70350F01	Ceramic 1070NA10FAL
■ CF2	91T70350F01	Ceramic 1070NA10FAL
▲ CF2	91T80084F01	Ceramic 1070MS10FAL
● CF101	91T68678F03	Ceramic 450I7
■ CF101	91T68678F03	Ceramic 450I7
▲ CF101	91T56243F02	Ceramic SFP468H
● CF102	91T60378F01	Ceramic BFU450C4N
■ CF102	91T60378F01	Ceramic BFU450C4N
▲ CF102	91T61065F01	Ceramic BFU468C4N
■ B.P.F1	91T58701F01	MPX 19K
▲ B.P.F1	91T58701F01	MPX 19K
■ B.P.F2	91T58701F01	MPX 19K
▲ B.P.F2	91T58701F01	MPX 19K
Capacitors		
C1	23S61524F12	Electrolytic 100 μF/10V
C2	08S53332F47	Chip 0.01 μF
C3	08S53332F51	Chip 0.022 μF
C4	08S53332F51	Chip 0.022 μF
C5	08S53332F51	Chip 0.022 μF

Note: ● : 7902 model only, ▲ : 7902F model only,
■ : 7902E model only, Others : Common

Symbol No.	Part No.	Description
C6	23S61524F32	Electrolytic 1 μ F/50V
C7	08S53332F55	Chip 0.047 μ F
C8	08S53332F17	Chip 33pF
C9	08S53332F17	Chip 33pF
C10	23S61524F32	Electrolytic 1 μ F/50V
C11	23S61524F32	Electrolytic 1 μ F/50V
C12	23T43707U04	Electrolytic 220 μ F/10V
C13	08S53332F55	Chip 0.047 μ F
C14	08S53332F47	Chip 0.01 μ F
C15	23S61524F28	Electrolytic 0.1 μ F/50V
C16	23S61524F18	Electrolytic 4.7 μ F/25V
C17	23T43707U04	Electrolytic 220 μ F/10V
C18	23S61524F14	Electrolytic 22 μ F/16V
C19	08S53332F41	Chip 3300pF
C20	23S61524F18	Electrolytic 4.7 μ F/25V
C21	08S53332F53	Chip 0.033 μ F
C22	08S53332F23	Chip 100pF
C23	08S53332F47	Chip 0.01 μ F
C24	08S53332F47	Chip 0.01 μ F
C27	23T43707U04	Electrolytic 220 μ F/10V
C28	08S53332F47	Chip 0.01 μ F
C29	23S61524F18	Electrolytic 4.7 μ F/25V
C30	23S61524F18	Electrolytic 4.7 μ F/25V
C31	23S61524F13	Electrolytic 10 μ F/16V
C32	08S53332F47	Chip 0.01 μ F
C33	23S61524F18	Electrolytic 4.7 μ F/25V
C34	23S61524F18	Electrolytic 4.7 μ F/25V
C35	23S61524F16	Electrolytic 47 μ F/16V
C36	08S53332F24	Chip 120pF
● C37	08S53332F51	Chip 0.022 μ F
● C38	08S53332F51	Chip 0.022 μ F
C101	08S53332F55	Chip 0.047 μ F
C102	08S53332F51	Chip 0.022 μ F
C103	08S53332F47	Chip 0.01 μ F
C104	08S53332F47	Chip 0.01 μ F
C105	23S61524F16	Electrolytic 47 μ F/16V
C106	23S61524F32	Electrolytic 1 μ F/50V
C107	08T50579F05	TF 0.022 μ F
C108	23S61524F12	Electrolytic 100 μ F/10V
C109	23S61524F12	Electrolytic 100 μ F/10V
C110	08S53332F51	Chip 0.022 μ F
C111	08T44481F03	Polypropylene 390pF
C112	08S53332F47	Chip 0.01 μ F
C113	23S61524F18	Electrolytic 4.7 μ F/25V
C114	08S53332F55	Chip 0.047 μ F

Symbol No.	Part No.	Description
C115	08S53332F55	Chip 0.047 μ F
C116	23S61524F17	Electrolytic 3.3 μ F/25V
● C117	08S53332F49	Chip 0.015 μ F
■ C117	08S53332F52	Chip 0.027 μ F
▲ C117	08S53332F57	Chip 0.1 μ F
● C118	08S53332F53	Chip 0.033 μ F
■ C118	08S65128F74	Chip 0.047 μ F
▲ C118	08S53332F56	Chip 0.068 μ F
C119	08S53332F47	Chip 0.01 μ F
C120	23S61524F13	Electrolytic 10 μ F/16V
C121	23S61524F33	Electrolytic 2.2 μ F/50V
C122	21C41701J08	Ceramic 15pF
C123	21C41701J08	Ceramic 15pF
C124	08S53332F55	Chip 0.047 μ F
C125	08T50579F05	TF 0.022 μ F
C126	08T50579F09	TF 0.047 μ F
VC101	20T47503F02	Trimmer TZ03 (RED)
VC102	20T47503F02	Trimmer TZ03 (RED)

Resistors (All resistors are chip 1/8W±5% unless otherwise noted.)

Symbol No.	Part No.	Description
R1	06S53330F61	2.2Kohm
R3	06S53330F53	1Kohm
R4	06S53330F39	270ohm
R5	06S53330F23	56ohm
● R6	06S53330F83	18Kohm
■ R6	06S53330F87	27Kohm
▲ R6	06S53330F87	27Kohm
R7	06S53330F89	33Kohm
R8	06S53330F77	10Kohm
R9	06S53330F69	4.7Kohm
R10	06S53330F85	22Kohm
R11	06S53330F79	12Kohm
R12	06S53330F93	47Kohm
R13	06S53330F93	47Kohm
R14	06S53330F97	68Kohm
R15	06S53330F77	10Kohm
R16	06S53330F13	22ohm
R17	06S53330F89	33Kohm
R18	06S53330F77	10Kohm
R19	06S53330F85	22Kohm

Note: ● : 7902 model only, ▲ : 7902F model only,
■ : 7902E model only, Others : Common

	Symbol No.	Part No.	Description
	R20	06S53330F13	22ohm
	R21	06S53330F93	47Kohm
	R22	06S53330F53	1Kohm
	R23	06S53330F35	180ohm
	R24	06S53330F01	4.7ohm
	R25	06S53330F29	100ohm
	R26	06S53330F97	68Kohm
	R27	06S53330F97	68Kohm
	R28	06S53330F93	47Kohm
	R29	06S53330F93	47Kohm
	R31	06S53330F77	10Kohm
	R32	06S53330F13	22ohm
	R33	06S53330F77	10Kohm
	R101	06S53330F15	27ohm
	R102	06S53330F93	47Kohm
	R103	06S53331F02	100Kohm
	R104	06S53331F02	100Kohm
	R105	06S53330F13	22ohm
	R106	06S53331F10	220Kohm
	R107	06S53331F10	220Kohm
	R108	06S53330F25	68ohm
	R109	06S53330F77	10Kohm
	R110	06S53330F15	27ohm
	R111	06S53330F77	10Kohm
	R112	06S53330F77	10Kohm
	R113	06S53330F69	4.7Kohm
	R114	06S53330F79	12Kohm
●	R115	06S53330F89	33Kohm
■	R115	06S53330F91	39Kohm
▲	R115	06S53330F82	16Kohm
	R116	06S53330F61	2.2Kohm
	R117	06S53330F77	10Kohm
	R118	06S53330F77	10Kohm
	R120	06S53330F97	68Kohm
	R121	06S53330F77	10Kohm
	R122	06S53330F29	100ohm
	R123	06S53330F53	1Kohm
	VR1	18T74439F21	Variable 220Kohm
	VR2	18T74439F19	Variable 100Kohm
	VR3	18T74439F13	Variable 10Kohm
	VR4	18T74439F13	Variable 10Kohm

Note: ● : 7902 model only, ▲ : 7902F model only,
■ : 7902E model only, Others : Common

Symbol No.	Part No.	Description
Control P.C.Board		
IC's		
IC202	51T74190F01	NJM2902
IC203	51T73719F01	NJM2904M
IC204	51T72742F01	CX20108
Transistors		
Q209	48T73023F01	Chip 2SD874A
Q210	48T73022F01	Chip 2SB766A
Q211	48T73023F01	Chip 2SD874A
Q212	48T73022F01	Chip 2SB766A
Q213	48T73023F01	Chip 2SD874A
Q214	48T73022F01	Chip 2SB766A
Q215	48T73023F01	Chip 2SD874A
Q216	48T73022F01	Chip 2SB766A
Q217	48T73023F01	Chip 2SD874A
Q218	48T73022F01	Chip 2SB766A
Q219	48T73023F01	Chip 2SD874A
Q220	48T73022F01	Chip 2SB766A
Q221	48T62967F09	Chip DTC114TK
Q222	48T62967F09	Chip DTC114TK
Q224	48T62967F09	Chip DTC114TK
Q225	48T62966F09	Chip DTA114T
Diode		
ZD201	48T62934F19	Chip Zener RD5.1MB2
Capacitors		
C202	08S53332F17	Chip 33pF
C203	08S53332F17	Chip 33pF
C204	08S53332F17	Chip 33pF
C205	23T74181F38	Chip Tantalum 10 μF/10V
C206	23T74181F38	Chip Tantalum 10 μF/10V
C207	08S53332F17	Chip 33pF
C208	08S53332F17	Chip 33pF
C209	08S53332F17	Chip 33pF
C212	23T74180F07	Chip Electrolytic 33 μF/25V
C213	08S53332F39	Chip 2200pF

Symbol No.	Part No.	Description
C215	08S53332F37	Chip 1500pF
C216	23T74180F16	Chip Electrolytic 2.2 μ F/50V
C217	08S53332F57	Chip 0.1 μ F
C218	08S53332F32	Chip 560pF
C219	23T74180F01	Chip Electrolytic 2.2 μ F/6.3V
C220	23T74180F07	Chip Electrolytic 33 μ F/25V
C221	08S53332F47	Chip 0.01 μ F
C222	08S53332F55	Chip 0.047 μ F
C223	23T74181F06	Chip Tantalum 0.47 μ F/16V
C224	08S53332F23	Chip 100pF
C225	08S53332F57	Chip 0.1 μ F
C226	08S53332F15	Chip 22pF
C227	08S53332F53	Chip 0.033 μ F
C228	08S53332F57	Chip 0.1 μ F
C229	23T74180F14	Chip Electrolytic 1 μ F/50V
C230	08S53332F20	Chip 56pF
C231	08S53332F46	Chip 8200pF
C232	08S53332F43	Chip 4700pF
C255	08S53332F47	Chip 0.01 μ F
Resistors	(All resistors are chip 1/8W±5% unless otherwise noted.)	
R216	06S53330F77	10Kohm
R217	06S53330F77	10Kohm
R218	06S53330F77	10Kohm
R219	06S53330F60	2Kohm
R220	06S53330F53	1Kohm
R221	06S53330F77	10Kohm
R222	06S53330F77	10Kohm
R223	06S53330F77	10Kohm
R224	06S53330F53	1Kohm
R225	06S53330F77	10Kohm
R226	06S53330F77	10Kohm
R227	06S53330F77	10Kohm
R228	06S53330F77	10Kohm
R229	06S53330F77	10Kohm
R230	06S53331F02	100Kohm
R231	06S53330F77	10Kohm
R232	06S53330F93	47Kohm
R233	06S53330F89	33Kohm
R234	06S53331F02	100Kohm
R236	06S53330F89	33Kohm

	Symbol No.	Part No.	Description
	R237	06S53330F77	10Kohm
	R238	06S53330F97	68Kohm
	R239	06S53330F69	4.7Kohm
	R240	06S53330F63	2.7Kohm
	R241	06S53330F93	47Kohm
	R242	06S53330F75	8.2Kohm
	R244	06S53330F61	2.2Kohm
	R245	06S53330F85	22Kohm
	R246	06S53331F02	100Kohm
	R247	06S53330F97	68Kohm
	R248	06S53330F85	22Kohm
	R249	06S53330F53	1Kohm
	R250	06S53330F77	10Kohm
	R251	06S53330F45	470ohm
	R252	06S53330F53	1Kohm
	R253	06S53331F02	100Kohm
	R254	06S53330F85	22Kohm
	R255	06S53331F06	150Kohm
	R256	06S53331F02	100Kohm
	R257	06S53330F87	27Kohm
	R258	06S53330F53	1Kohm
	R259	06S53330F71	5.6Kohm
	R260	06S53330F87	27Kohm
	R261	06S53331F02	100Kohm
	R262	06S53331F02	100Kohm
	R290	06S53330F77	10Kohm
	R291	06S53330F77	10Kohm
	R292	06S53331F10	220Kohm
	R294	06S53330F89	33Kohm
	R295	06S53330F49	680ohm
●	VR201	18T74439F13	Variable 10Kohm
■	VR201	18T74439F13	Variable 10Kohm
▲	VR201	18T56963F03	Variable 10Kohm
●	VR202	18T74439F15	Variable 22Kohm
■	VR202	18T74439F15	Variable 22Kohm
▲	VR202	18T56963F04	Variable 22Kohm

Note: ● : 7902 model only, ▲ : 7902F model only,
■ : 7902E model only, Others : Common

Symbol No.	Part No.	Description
RF Amp P.C.Board		
IC's		
IC201	51T74190F01	NJM2902
IC301	51T67023F01	NJM4558
IC302	51T72750F01	CX20109
Transistors		
Q201	48T72751F01	2SD1227
Q202	48T70213F01	2SB911M
Q203	48T72751F01	2SD1227
Q204	48T70213F01	2SB911M
Q205	48T72751F01	2SD1227
Q206	48T70213F01	2SB911M
Q207	48T72751F01	2SD1227
Q208	48T70213F01	2SB911M
Q301	48T70213F01	2SB911M
Q302	48T62966F03	Chip DTA124
Q303	48T62967F03	Chip DTC124K
Q305	48T52437F01	Chip 2SB709A
Q306	48T52438F01	Chip 2SD601A
Diodes/LED		
D301	48T56286F01	1SS106
D302	48T83077F01	1SS106TD
D303	48T83077F01	1SS106TD
LD301	48T69249F01	LED SLP−935A−50A (RED)
Capacitors		
C201	23T74437F32	Tantalum 10 μF/16V
C301	08S53332F53	Chip 0.033 μF
C302	23S61523F25	Electrolytic 0.1 μF/50V
C303	08S53332F47	Chip 0.01 μF
C304	23T74437F32	Tantalum 10 μF/16V
C305	23S61523F28	Electrolytic 0.47 μF/50V
C306	08S53332F47	Chip 0.01 μF
C307	08S53332F53	Chip 0.033 μF
C308	08S53332F20	Chip 56pF
C309	08S53332F20	Chip 56pF

Symbol No.	Part No.	Description
C310	08S53332F15	Chip 22pF
C311	08S53332F15	Chip 22pF
C312	23T74437F14	Tantalum 33 μF/6.3V
C313	23T74437F32	Tantalum 10 μF/16V
C314	23S61523F08	Electrolytic 100 μF/6.3V
C315	23S61523F06	Electrolytic 33 μF/6.3V
C316	23S61523F06	Electrolytic 33 μF/6.3V
C317	23S41059P25	Tantalum 10 μF/6.3V
Resistors (All resistors are chip 1/8W±5% unless otherwise noted.)		
R201	06S53330F61	2.2Kohm
R202	06S53330F61	2.2Kohm
R203	06S53330F61	2.2Kohm
R204	06S53330F61	2.2Kohm
R205	06S53331F06	150Kohm
R206	06S53331F06	150Kohm
R207	06S53331F06	150Kohm
R208	06S53331F06	150Kohm
R209	06S53330F35	180ohm
R210	06S53331F02	100Kohm
R211	06S53331F02	100Kohm
R212	06S53331F02	100Kohm
R213	06S53331F02	100Kohm
R214	06S53330F93	47Kohm
R215	06S53330F93	47Kohm
R301	06S53331F26	1Mohm
R302	06S53330F89	33Kohm
R303	06S53331F18	470Kohm
R304	06S53330F85	22Kohm
R305	06S53330F77	10Kohm
R306	06S53330F35	180ohm
R308	06S53330F85	22Kohm
R309	06S53331F02	100Kohm
R310	06S53330F77	10Kohm
R311	06S53331F12	270Kohm
R312	06S53331F08	180Kohm
R313	06S53331F02	100Kohm
R314	06S53331F12	270Kohm
R315	06S53331F06	150Kohm
R316	06S53330F53	1Kohm

Note: ● : 7902 model only, ▲ : 7902F model only,
■ : 7902E model only, Others : Common

Symbol No.	Part No.	Description
R317	06S53330F05	10ohm
R318	06S53330F53	1Kohm
R319	06S53330F95	56Kohm
R320	06S53331F30	2.2Mohm
R321	06S53330F67	3.9Kohm
R322	06S53330F77	10Kohm
R323	06S53330F47	560ohm
R324	06S53330F61	2.2Kohm
R325	06S53330F77	10Kohm
R326	06S53330F65	3.3Kohm
VR301	18T74439F21	Variable 220Kohm
VR302	18T74439F19	Variable 100Kohm
Main P.C.Board		
IC's		
IC205	51T72747F01	NJM072M
IC206	51T72743F01	SM5802A
IC207	51T72739F01	CX23035
IC208	51T80623F01	CXK5816M
or	51T62928F02	μ PD449G
IC209	51T72744F01	PCM55
IC401	51T72745F01	μ PD4053BG
IC402	51T73718F01	NJM4560M
IC403	51T74183F01	NJM2060
IC404	51T63892F01	μ PD4066BG
IC405	51T73718F01	NJM4560M
IC406	51T73718F01	NJM4560M
IC407	51T73718F01	NJM4560M
IC408	51T69242F01	NJM5532M
IC601	51T71061F01	71061F01
■ IC650	51T74184F01	74184F01
● IC650	51T74184F01	74184F01
▲ IC650	51T74184F03	74184F03
or	51T82289F01	μ PD75108G−504
IC651	51T73935F01	μ PD4028BG
IC652	51T74191F02	MB88306PF
IC802	51T73028F01	NJM2903M
or	51T73285F01	BA6993F

Symbol No.	Part No.	Description
Transistors		
Q10	48T62967F08	Chip DTC144W
Q11	48T64222F07	Chip UN2217
Q223	48T64222F02	Chip UN2212
Q401	48T62966F03	Chip DTA124
Q402	48T52437F01	Chip 2SB709A
Q403	48T52437F01	Chip 2SB709A
Q601	48T42182U01	2SD661
Q602	48T42182U01	2SD661
Q651	48T62966F03	Chip DTA124
Q652	48T64222F02	Chip UN2212
Q653	48T62967F09	Chip DTC114T
Q663	48T72751F01	2SD1227
Q665	48T64222F02	Chip UN2212
Q666	48T64222F02	Chip UN2212
Q667	48T64222F02	Chip UN2212
Q668	48T64222F02	Chip UN2212
Q669	48T64222F02	Chip UN2212
Q670	48T64222F02	Chip UN2212
Q671	48T70213F01	2SB911M
Q672	48T63417F01	Chip 2SC2412K
Q673	48T63788F01	Chip 2SD1328
Q674	48T64222F02	Chip UN2212
Q675	48T52437F01	Chip 2SB709A
Q676	48T80674F01	Chip FET 2SK621
Q677	48T80674F01	Chip FET 2SK621
Q678	48T80674F01	Chip FET 2SK621
Q679	48T80674F01	Chip FET 2SK621
Q680	48T80674F01	Chip FET 2SK621
Q681	48T64221F07	Chip UN2117
Q682	48T63788F01	Chip 2SD1328
Q683	48T63417F01	Chip 2SC2412K
Q684	48T63788F01	Chip 2SD1328
Q685	48T63788F01	Chip 2SD1328
Q686	48T63788F01	Chip 2SD1328
Q687	48T52437F01	Chip 2SB709A
Q688	48T80674F01	Chip FET 2SK621
Q689	48T80674F01	Chip FET 2SK621
Q690	48T64221F02	Chip UN2112
Q691	48T64222F02	Chip UN2212
Q803	48T72751F01	2SD1227

Note: ● : 7902 model only, ▲ : 7902F model only,
■ : 7902E model only, Others : Common

Symbol No.	Part No.	Description
Q804	48T70213F01	2SB911M
Q805	48T72751F01	2SD1227
Q806	48T70213F01	2SB911M
Q807	48T64222F02	Chip UN2212
Q808	48T64222F02	Chip UN2212
Q809	48T64222F02	Chip UN2212
Q810	48T64221F02	Chip UN2112
Q811	48T72751F01	2SD1227
Q812	48T74164F01	2SD1742
Q813	48T52437F01	Chip 2SB709A
Q814	48T64222F02	Chip UN2212
Q815	48T64222F02	Chip UN2212
Q816	48T52438F01	Chip 2SD601A
Q817	48T52437F01	Chip 2SB709A
Diodes		
D402	48T64134F01	Chip DA204K
D601	48T68828F01	1SS133
or	48T44813F01	MA165TA
D641	48T81063F01	Chip MA159
D642	48T81063F01	Chip MA159
D643	48T81063F01	Chip MA159
D652	48T52444F01	Chip MA151A
D654	48T68828F01	1SS133
or	48T44813F01	MA165TA
D655	48T68828F01	1SS133
or	48T44813F01	MA165TA
D656	48T68828F01	1SS133
or	48T44813F01	MA165TA
D657	48T52446F01	Chip MA151WK
D658	48C40235G02	10E2
D659	48C40235G02	10E2
D660	48C40235G02	10E2
D661	48C40235G02	10E2
D662	48C40235G02	10E2
D665	48T52444F01	Chip MA151A
D666	48T52444F01	Chip MA151A
D667	48T52444F01	Chip MA151A
● D668	48T52444F01	Chip MA151A
■ D669	48T52444F01	Chip MA151A
▲ D669	48T52444F01	Chip MA151A
D671	48T52444F01	Chip MA151A

Symbol No.	Part No.	Description
D672	48T52444F01	Chip MA151A
D673	48T52444F01	Chip MA151A
D674	48T52444F01	Chip MA151A
D675	48T52444F01	Chip MA151A
● D676	48T52444F01	Chip MA151A
■ D676	48T52444F01	Chip MA151A
D677	48T52444F01	Chip MA151A
D678	48T52444F01	Chip MA151A
■ D690	48T52444F01	Chip MA151A
▲ D690	48T52444F01	Chip MA151A
D811	48T68828F01	1SS133
or	48T44813F01	MA165TA
VD201	48T72759F01	Varistor KV1260
ZD601	48T68697F18	Zener HZS5.1EB2
ZD602	48T68697F43	Zener HZS11EB2
▲ ZD610	48T68701F16	Zener, MTZ6.2B
▲ ZD611	48T68701F10	Zener, MTZ5.1B
ZD651	48T62934F23	Chip Zener RD5.6MB3
ZD801	48T68697F49	Zener HZS13EB2
ZD802	48T68697F49	Zener HZS13EB2
ZD803	48T68697F22	Zener HZS5.6EB3
ZD804	48T68697F22	Zener HZS5.6EB3
ZD805	48T62934F23	Chip Zener RD5.6MB3
ZD806	48T62934F19	Chip Zener RD5.1MB2
ZD807	48T68697F43	Zener HZS11EB2
ZD808	48T62934F23	Chip Zener RD5.6MB3
ZD809	48T62934F23	Chip Zener RD5.6MB3
ZD810	48T68697F35	Zener HZS9.1EB1
Coils		
L201	24T72767F01	7 μ H
L650	24T70709F01	47 μ H
L801	24T70709F01	47 μ H
Relays		
RL401	80T73804F02	FBR42NG012−P
RL402	80T73804F02	FBR42NG012−P
RL403	80T73804F02	FBR42NG012−P

Note: ● : 7902 model only, ▲ : 7902F model only,
■ : 7902E model only, Others : Common

Symbol No.	Part No.	Description
Switch／Crystals		
S650	40T72772F01	Switch TR－73B50F
X201	48T72757F01	8.4672MHz
X601	48T55073F01	4.5MHz－K
X651	91T60592F02	Ceramic Lock CSA4.19MG
Capacitors		
C233	08S65128F69	Chip 0.01 μF
C234	08S65128F70	Chip 0.012 μF
C235	23S61523F05	Electrolytic 22 μF／6.3V
C236	08S53332F56	Chip 0.068 μF
C237	08S53332F57	Chip 0.1 μF
C238	08S65128F69	Chip 0.01 μF
C239	23S61523F12	Electrolytic 10 μF／16V
C240	23S61523F12	Electrolytic 10 μF／16V
C241	08S65128F61	Chip 2200pF
C242	23S61523F29	Electrolytic 1 μF／50V
C243	08S65128F23	Chip 33pF
C244	08S65128F39	Chip 150pF
C245	08S65128F23	Chip 33pF
C246	08S65128F61	Chip 2200pF
C247	23S41059P35	Tantalum 33 μF／10V
C248	23S61523F14	Electrolytic 33 μF／16V
C249	23S61523F14	Electrolytic 33 μF／16V
C250	23S61523F12	Electrolytic 10 μF／16V
C251	23S61523F12	Electrolytic 10 μF／16V
C252	08S65128F19	Chip 22pF
C253	08S65128F19	Chip 22pF
C254	08S65128F69	Chip 0.01 μF
C401	08T00151L09	Polypropylen 470pF
C402	08T00151L09	Polypropylen 470pF
C403	23S61523F29	Electrolytic 1 μF／50V
C404	23S61523F29	Electrolytic 1 μF／50V
C405	08T72783F38	Chip 1800pF
C406	08T72783F38	Chip 1800pF
C407	08T72783F38	Chip 1800pF
C408	08T72783F38	Chip 1800pF
C409	08T72783F38	Chip 1800pF
C410	08T72783F38	Chip 1800pF
C411	08T72783F38	Chip 1800pF
C412	08T72783F38	Chip 1800pF
C413	08T72783F38	Chip 1800pF

	Symbol No.	Part No.	Description
	C414	08T72783F38	Chip 1800pF
	C415	08T72783F38	Chip 1800pF
	C416	08T72783F38	Chip 1800pF
	C417	08T72783F38	Chip 1800pF
	C418	08T72783F38	Chip 1800pF
	C419	08T72783F38	Chip 1800pF
	C420	08T72783F38	Chip 1800pF
	C421	23S61523F30	Electrolytic 2.2 μF／50V
	C422	23S61523F30	Electrolytic 2.2 μF／50V
	C423	23S61523F29	Electrolytic 1 μF／50V
	C424	23S61523F29	Electrolytic 1 μF／50V
	C425	08T44481F29	Polypropylen 4700pF
	C426	08T44481F29	Polypropylen 4700pF
	C427	23T71210F01	Electrolytic B.P. 10 μF／16V
	C428	23T71210F01	Electrolytic B.P. 10 μF／16V
	C429	23S61523F29	Electrolytic 1 μF／50V
	C430	23S61523F29	Electrolytic 1 μF／50V
●	C431	23S57422F05	Electrolytic 1 μF／50V
■	C431	23S61523F26	Electrolytic 0.22 μF／50V
▲	C431	23S61523F26	Electrolytic 0.22 μF／50V
●	C432	23S57422F05	Electrolytic 1 μF／50V
■	C432	23S61523F26	Electrolytic 0.22 μF／50V
▲	C432	23S61523F26	Electrolytic 0.22 μF／50V
	C433	23S61523F12	Electrolytic 10 μF／16V
	C434	23S61523F12	Electrolytic 10 μF／16V
	C435	08T80673F05	TF 0.022 μF
	C436	08T80673F05	TF 0.022 μF
	C437	08T80673F05	TF 0.022 μF
	C438	08T80673F05	TF 0.022 μF
	C439	08T82122F45	Chip 220pF
	C440	08T82122F45	Chip 220pF
	C441	08T44481F21	Polypropylen 2200pF
	C442	08T44481F21	Polypropylen 2200pF
	C443	08T82122F29	Chip 47pF
	C444	08T82122F29	Chip 47pF
●	C445	23S61523F29	Electrolytic 1 μF／50V
■	C445	23S61523F29	Electrolytic 1 μF／50V
▲	C445	23S57422F05	Electrolytic 1 μF／50V
●	C446	23S61523F29	Electrolytic 1 μF／50V
■	C446	23S61523F29	Electrolytic 1 μF／50V
▲	C446	23S57422F05	Electrolytic 1 μF／50V
	C447	23S61523F29	Electrolytic 1 μF／50V
	C448	23S61523F29	Electrolytic 1 μF／50V
●	C451	23S61523F30	Electrolytic 2.2 μF／50V
■	C451	23S61523F30	Electrolytic 2.2 μF／50V

Note: ● : 7902 model only, ▲ : 7902F model only,
■ : 7902E model only, Others : Common

Symbol No.		Part No.	Description	
▲	C451	23S57422F06	Electrolytic	2.2 μ F/50V
●	C452	23S61523F30	Electrolytic	2.2 μ F/50V
■	C452	23S61523F30	Electrolytic	2.2 μ F/50V
▲	C452	23S57422F06	Electrolytic	2.2 μ F/50V
	C453	23T71210F04	Electrolytic B.P	33 μ F/16V
	C454	23T71210F04	Electrolytic B.P	33 μ F/16V
	C459	23S61523F12	Electrolytic	10 μ F/16V
	C460	23S61523F12	Electrolytic	10 μ F/16V
	C461	08S65128F23	Chip	33pF
	C462	08S65128F23	Chip	33pF
	C463	23S61523F12	Electrolytic	10 μ F/16V
	C464	23S61523F12	Electrolytic	10 μ F/16V
●	C465	08S65128F23	Chip	33pF
■	C465	08S65128F25	Chip	39pF
▲	C465	08T65128F21	Chip	27pF
●	C466	08S65128F23	Chip	33pF
■	C466	08S65128F25	Chip	39pF
▲	C466	08T65128F21	Chip	27pF
	C467	23S61523F29	Electrolytic	1 μ F/50V
	C468	23S61523F29	Electrolytic	1 μ F/50V
	C469	23S61523F12	Electrolytic	10 μ F/16V
	C601	23T72784F05	Electrolytic B.P.	1 μ F/50V
	C602	08S65128F73	Chip	0.033 μ F
	C603	08S65128F69	Chip	0.01 μ F
	C604	23C44780P22	Electrolytic	100 μ F/16V
	C605	08S65128F69	Chip	0.01 μ F
	C606	08S65128F19	Chip	22pF
	C607	08S65128F19	Chip	22pF
	C608	23T43247F19	Electrolytic	220 μ F/6.3V
	C609	08S65128F69	Chip	0.01 μ F
	C652	23S61523F29	Electrolytic	1 μ F/50V
	C653	08S65128F19	Chip	22pF
	C654	08S65128F19	Chip	22pF
	C656	08S53332F47	Chip	0.01 μ F
	C657	23S61523F12	Electrolytic	10 μ F/16V
	C658	08S65128F74	Chip	0.047 μ F
	C659	08S65128F74	Chip	0.047 μ F
	C660	08S65128F74	Chip	0.047 μ F
	C661	08S65128F74	Chip	0.047 μ F
	C662	08S65128F74	Chip	0.047 μ F
	C663	23S61523F29	Electrolytic	1 μ F/50V
	C664	23T43247F18	Electrolytic	330 μ F/6.3V
	C665	23T43247F18	Electrolytic	330 μ F/6.3V
	C667	23S61523F12	Electrolytic	10 μ F/16V
	C668	23S61523F12	Electrolytic	10 μ F/16V

Symbol No.		Part No.	Description	
	C670	23T43247F18	Electrolytic	330 μ F/6.3V
	C671	08S65128F57	Chip	1000pF
	C672	08S65128F57	Chip	1000pF
	C809	23S61524F16	Electrolytic	47 μ F/16V
	C814	23S61524F16	Electrolytic	47 μ F/16V
	C815	23S61524F16	Electrolytic	47 μ F/16V
	C816	23T61513F20	Electrolytic	47 μ F/25V
	C817	23T61513F20	Electrolytic	47 μ F/25V
	C818	23S61523F14	Electrolytic	33 μ F/16V
	C819	23S61523F14	Electrolytic	33 μ F/16V
	C820	23T74181F07	Chip Tantalum	0.47 μ F/25V
	C821	23T74181F07	Chip Tantalum	0.47 μ F/25V
	C822	23S61523F14	Electrolytic	33 μ F/16V
	C823	08S65128F69	Chip	0.01 μ F
	C824	08S65128F69	Chip	0.01 μ F
	C825	23S61523F14	Electrolytic	33 μ F/16V
	C826	23S61523F17	Electrolytic	4.7 μ F/25V
	C827	23S61523F28	Electrolytic	0.47 μ F/50V
	C828	23T43247F18	Electrolytic	330 μ F/6.3V
	C829	23S61523F29	Electrolytic	1 μ F/50V
	C830	08S65128F69	Chip	0.01 μ F
	C831	08S65128F69	Chip	0.01 μ F
	C832	23S61523F06	Electrolytic	33 μ F/6.3V
	C833	23S61523F06	Electrolytic	33 μ F/6.3V
	C834	23S61523F13	Electrolytic	22 μ F/16V
	C835	23S61523F12	Electrolytic	10 μ F/16V
	C836	23S61524F16	Electrolytic	47 μ F/16V
	C837	23S61523F07	Electrolytic	47 μ F/6.3V

Resistors (All resistors are chip 1/16W±5% unless otherwise noted.)

	R30	06S64995F69	4.7Kohm
	R263	06S64995F93	47Kohm
	R264	06S64996F02	100Kohm
	R265	06S64995F79	12Kohm
	R266	06S64995F77	10Kohm
	R267	06S64995F71	5.6Kohm
	R268	06S64995F61	2.2Kohm
	R270	06S64995F73	6.8Kohm
	R271	06S64995F81	15Kohm
	R272	06S64995F73	6.8Kohm

Note: ● : 7902 model only, ▲ : 7902F model only,
■ : 7902E model only, Others : Common

Symbol No.	Part No.	Description
R273	06S64996F26	1Mohm
R274	06S64995F69	4.7Kohm
R275	06S64995F89	33Kohm
R276	06S64995F89	33Kohm
R277	06S64995F63	2.7Kohm
R278	06S64995F80	13Kohm
R279	06S64995F76	9.1Kohm
R280	06S64995F89	33Kohm
R281	06S64995F53	1Kohm
R282	06S64996F02	100Kohm
R283	06S64996F02	100Kohm
R284	06S64995F69	4.7Kohm
R285	06S64996F02	100Kohm
R293	06S64995F77	10Kohm
R401	06S64995F64	3Kohm
R402	06S64995F64	3Kohm
R403	06S64995F57	1.5Kohm
R404	06S64995F57	1.5Kohm
R405	06S64995F92	43Kohm
R406	06S64995F92	43Kohm
R407	06S64995F61	2.2Kohm
R408	06S64995F61	2.2Kohm
R409	06S64995F73	6.8Kohm
R410	06S64995F73	6.8Kohm
R411	06S64995F71	5.6Kohm
R412	06S64995F71	5.6Kohm
R413	06S64995F63	2.7Kohm
R414	06S64995F63	2.7Kohm
R415	06S64995F71	5.6Kohm
R416	06S64995F71	5.6Kohm
R417	06S64995F61	2.2Kohm
R418	06S64995F61	2.2Kohm
R419	06S64995F71	5.6Kohm
R420	06S64995F71	5.6Kohm
R421	06S64995F63	2.7Kohm
R422	06S64995F63	2.7Kohm
R423	06S64995F71	5.6Kohm
R424	06S64995F71	5.6Kohm
R425	06S64995F95	56Kohm
R426	06S64995F95	56Kohm
R427	06S64995F78	11Kohm
R428	06S64995F78	11Kohm
R429	06S64995F53	1Kohm
R430	06S64995F53	1Kohm
R431	06S64995F65	3.3Kohm

Symbol No.	Part No.	Description
R432	06S64995F65	3.3Kohm
R433	06S64996F18	470Kohm
R434	06S64996F18	470Kohm
R435	06S53330F85	22Kohm 1／8W
R436	06S53330F85	22Kohm 1／8W
R437	06S64995F77	10Kohm
R438	06S64995F77	10Kohm
R439	06S64995F77	10Kohm
R440	06S64995F77	10Kohm
R441	06S64995F77	10Kohm
■ R442	06S64996F11	240Kohm
● R442	06S64996F04	120Kohm
▲ R442	06S64996F14	330Kohm
■ R443	06S64996F11	240Kohm
● R443	06S64996F04	120Kohm
▲ R443	06S64996F14	330Kohm
R444	06S64995F74	7.5Kohm
R445	06S64995F74	7.5Kohm
R446	06S64995F85	22Kohm
R447	06S64995F85	22Kohm
R448	06S64995F77	10Kohm
R449	06S64995F77	10Kohm
R450	06S64995F52	910ohm
R451	06S64995F52	910ohm
R452	06S64995F74	7.5ohm
R453	06S64995F74	7.5ohm
R454	06S64995F85	22Kohm
R455	06S64995F85	22Kohm
R463	06S64995F77	10Kohm
R464	06S64995F77	10Kohm
R465	06S64995F77	10Kohm
R466	06S64995F77	10Kohm
R467	06S64995F53	1Kohm
R468	06S64995F53	1Kohm
R469	06S64995F53	1Kohm
R470	06S64995F53	1Kohm
R475	06S64995F53	1Kohm
R476	06S64995F53	1Kohm
R477	06S64995F89	33Kohm
R478	06S64995F89	33Kohm
R479	06S64995F89	33Kohm
R480	06S64995F89	33Kohm
R481	06S64995F57	1.5Kohm
R482	06S64995F57	1.5Kohm
R483	06S64995F57	1.5Kohm

Note: ● : 7902 model only, ▲ : 7902F model only,
■ : 7902E model only, Others : Common

Symbol No.	Part No.	Description
R484	06S64995F57	1.5Kohm
R485	06S53330F61	2.2Kohm 1／8W
R486	06S53330F61	2.2Kohm 1／8W
R489	06S64995F53	1Kohm
R601	06S64995F77	10Kohm
R602	06S64995F53	1Kohm
R603	06S64995F65	3.3Kohm
R604	06S64995F79	12Kohm
R605	06S64995F73	6.8Kohm
R607	06S64995F53	1Kohm
● R608	06S64996F02	100Kohm
■ R608	06S64996F02	100Kohm
R609	06S64996F02	100Kohm
R610	06S64996F02	100Kohm
● R611	06S64996F02	100Kohm
R612	06S64996F02	100Kohm
R613	06S64995F69	4.7Kohm
R614	06T70072F33	150ohm 1／4W
R615	06T70072F33	150ohm 1／4W
R654	06S64996F10	220Kohm
R655	06S64995F47	560ohm
R656	06S64996F12	270Kohm
R657	06S64995F93	47Kohm
R659	06S64995F93	47Kohm
R660	06S64996F02	100Kohm
R661	06S64996F02	100Kohm
R662	06S64996F02	100Kohm
R663	06S64996F02	100Kohm
R664	06S64996F02	100Kohm
R666	06S64995F77	10Kohm
R667	06S64995F53	1Kohm
R668	06T70072F17	33ohm 1／4W
R669	06T70072F17	33ohm 1／4W
R670	06T70072F17	33ohm 1／4W
R671	06S64995F81	15Kohm
R672	06S64995F77	10Kohm
R673	06S64995F77	10Kohm
R674	06S64995F77	10Kohm
R675	06S64995F69	4.7Kohm
R676	06S64995F77	10Kohm
R680	06S64995F61	2.2Kohm
R681	06S64995F77	10Kohm
R682	06S64995F85	22Kohm
R683	06T70072F80	2.7ohm 1／4W
R684	06T70072F80	2.7ohm 1／4W

Symbol No.	Part No.	Description
R685	06S64995F77	10Kohm
R686	06S64995F77	10Kohm
R687	06S64995F77	10Kohm
R688	06S64995F77	10Kohm
R689	06S64995F77	10Kohm
R690	06S64995F93	47Kohm
■ R691	06S64996F02	100Kohm
▲ R691	06S64996F02	100Kohm
▲ R692	06S64996F02	100Kohm
R693	06S64996F02	100Kohm
R694	06S64996F02	100Kohm
R695	06S64995F77	10Kohm
R696	06S64995F77	10Kohm
R697	06S64995F61	2.2Kohm
R698	06S64995F61	2.2Kohm
R699	06S64995F77	10Kohm
R816	06S64995F43	390ohm
R817	06S64995F43	390ohm
R818	06S64995F43	390ohm
R819	06S64995F43	390ohm
R820	06S64995F77	10Kohm
R821	06S64995F95	56Kohm
R822	06S64995F77	10Kohm
R823	06S64995F77	10Kohm
R824	06S64995F77	10Kohm
R825	06S64995F93	47Kohm
R826	06S64996F12	270Kohm
R827	06S64995F61	2.2Kohm
R828	06S64995F77	10Kohm
R829	06S64995F01	4.7ohm
R830	06S64995F69	4.7Kohm
R831	06S64995F77	10Kohm
R832	06S53330F43	390ohm 1／8W
R833	06S64995F67	3.9Kohm
R834	06S64995F77	10Kohm
R836	06S64995F61	2.2Kohm
R837	06S64995F61	2.2Kohm
R923	06T70072F80	2.7ohm 1／4W
R924	06T70072F80	2.7ohm 1／4W
R925	06T70072F80	2.7ohm 1／4W
R926	06T70072F80	2.7ohm 1／4W
R927	06T70072F80	2.7ohm 1／4W
R6001	51T74182F03	Block 100Kohm×4
R6050	51T74182F04	Block 10Kohm×7
R6051	51T74182F02	Block 10Kohm×4

Note: ● : 7902 model only, ▲ : 7902F model only,
■ : 7902E model only, Others : Common

Symbol No.	Part No.	Description
R6052	51T74182F01	Block 100Kohm×3
● R6100	06S64995F69	4.7Kohm
■ R6100	06S64995F69	4.7Kohm
R6101	06S64995F53	1Kohm
R6102	06S64995F61	2.2Kohm
R6103	06S64995F53	1Kohm
R6104	06S64995F53	1Kohm
R6105	06S64995F77	10Kohm
R6106	06S64995F77	10Kohm
R6107	06S64995F77	10Kohm
R6108	06S64995F93	47Kohm
R6109	06S64995F77	10Kohm
R1110	06S64995F85	22Kohm
VR403	18T74178F01	Volume, Rotary
VR404		
VR405		
S801		

Load P.C Board

IC

Symbol No.	Part No.	Description
IC653	51T74030F01	MB3763PF

Transistors

Symbol No.	Part No.	Description
Q650	48T73023F01	Chip 2SD874A
Q654	48T64221F02	Chip UN2112
Q656	48T64221F02	Chip UN2112
Q657	48T74164F11	2SD1742
Q658	48T64221F02	Chip UN2112
Q659	48T64222F02	Chip UN2212
Q660	48T74709F01	2SD1749

Diodes

Symbol No.	Part No.	Description
D650	48T74692F01	MA291
D651	48T74692F01	MA291
ZD650	48T62934F37	Chip Zener RD9.1MB2

Capacitor

Symbol No.	Part No.	Description
C650	23T74181F40	Chip Tantalum 10 μ F/25V

Resistors (All resistors are chip 1/8W±5% unless otherwise noted.)

Symbol No.	Part No.	Description
R649	06S53330F53	1Kohm
R650	06S53330F53	1Kohm
R651	06S53330F77	10Kohm
R653	06S53330F53	1Kohm

D/D P.C.Board

IC/Transistors

Symbol No.	Part No.	Description
IC801	51T73883F01	IC MB3759PF
Q801	48T72754F01	2SA1385L
Q802	48T72754F01	2SA1385L

Diodes

Symbol No.	Part No.	Description
D801	48T72753F01	1SS130
D802	48T72753F01	1SS130
D803	48T74541F01	1SS83
D804	48T74541F01	1SS83
D805	48T74541F01	1SS83
D806	48T74541F01	1SS83
D807	48T74541F01	1SS83
D808	48T74541F01	1SS83
D809	48T74541F01	1SS83
D810	48T74541F01	1SS83

Coils/Transformar

Symbol No.	Part No.	Description
L802	24T71179F01	Inductor 100 μ H
L803	24T71179F27	Inductor 15mH
L804	24T71179F18	Inductor 2.7mH
L805	24T71179F18	Inductor 2.7mH
L806	24T71179F15	Inductor 1.5mH
L807	24T71179F15	Inductor 1.5mH
T801	24T72768F01	Transformer 256B

Capacitors

Symbol No.	Part No.	Description
C801	23C44780P23	Electrolytic 220 μ F/16V
C803	23S61523F30	Electrolytic 2.2 μ F/50V
C804	23S61523F15	Electrolytic 47 μ F/16V
C805	08S53332F35	Chip 1000pF
C807	23C44780P23	Electrolytic 220 μ F/16V

Note: ● : 7902 model only, ▲ : 7902F model only,
■ : 7902E model only, Others : Common

Symbol No.	Part No.	Description
C808	23C44780P23	Electrolytic 220 μ F/16V
C810	23C44780P22	Electrolytic 100 μ F/16V
C811	23C44780P22	Electrolytic 100 μ F/16V
C812	23T68328F28	Electrolytic 100 μ F/25V
C813	23T68328F28	Electrolytic 100 μ F/25V
Resistors	(All resistors are chip 1/8W±5% unless otherwise noted.)	
R801	06S53330F29	100ohm
R802	06T70072F49	680ohm 1/4W
R803	06T70072F49	680ohm 1/4W
R804	06S53331F19	510Kohm
R805	06S53330F53	1Kohm
R806	06T70072F49	680ohm 1/4W
R807	06T70072F49	680ohm 1/4W
R808	06S53330F83	18Kohm
R809	06S53330F85	22Kohm
R810	06S53330F77	10Kohm
R811	06S53331F26	1Mohm
R812	06S53330F77	10Kohm
R813	06S53330F55	1.2Kohm
R814	06S53330F53	1Kohm
R815	06S53330F29	100ohm
VR801	18T74439F05	Variable 470ohm
Front P.C.Board		
IC		
IC901	51T72749F01	LC7580
Diodes/LED's		
D901	48T52445F01	Chip MA151WA
● D902	48S134816	1S1555
■ D902	48S134816	1S1555
▲ D902	48T52444F01	Chip MA151A
LD901	48T51833F04	LED AA4524K (ORG)
LD902	48T51833F04	LED AA4524K (ORG)
LD903	48T51833F04	LED AA4524K (ORG)
LD904	48T51833F04	LED AA4524K (ORG)
LD905	48T51833F04	LED AA4524K (ORG)
LD906	48T51833F04	LED AA4524K (ORG)

Note: ● : 7902 model only, ▲ : 7902F model only,
■ : 7902E model only, Others : Common

Symbol No.	Part No.	Description
LD907	48T51833F04	LED AA4524K (ORG)
LD908	48T51833F04	LED AA4524K (ORG)
LD909	48T51833F04	LED AA4524K (ORG)
LD910	48T51833F04	LED AA4524K (ORG)
LD911	48T51833F04	LED AA4524K (ORG)
LD912	48T51833F04	LED AA4524K (ORG)
LD913	48T51833F04	LED AA4524K (ORG)
LD914	48T51833F04	LED AA4524K (ORG)
LD915	48T51833F04	LED AA4524K (ORG)
LD916	48T67926F01	LED EBG5608S (GRN)
Switches		
S901	40T67523F08	TACT KHQ 11906 (FWD)
S902	40T67523F08	TACT KHQ 11906 (UP)
S903	40T62951F03	TACT 10908 (PRESET)
S904	40T67523F07	TACT KHQ 11908 (ST)
S905	40T62951F03	TACT 10908 (TUNE)
S906	40T62951F03	TACT 10908 (SCAN)
S907	40T62951F03	TACT 10908 (CLOCK)
S908	40T67523F08	TACT KHQ 11906 (RWD)
S909	40T62951F03	TACT 10908 (REPEAT)
S910	40T62951F03	TACT 10908 (PLAY)
S911	40T67523F07	TACT KHQ 11908 (ME)
S912	40T62951F03	TACT 10908 (ADI)
S913	40T62951F03	TACT 10908 (DX)
S914	40T67523F08	TACT KHQ 11906 (DOWN)
S915	40T62951F03	TACT 10908 (CLEAR)
S916	40T62951F03	TACT 10908 (PSP)
S917	40T62951F03	TACT 10908 (EJECT)
S918	40T62951F03	TACT 10908 (RESET)
Lamps		
PL901	65T63304F05	Pilot 6V−65mA
PL902	65T63304F05	Pilot 6V−65mA
PL903	65T63304F05	Pilot 6V−65mA
PL904	65T81729F01	Pilot 6.3V−0.1A
PL905	65T81729F01	Pilot 6.3V−0.1A
PL906	65T63304F05	Pilot 6V−65mA
PL907	65T73096F02	Pilot 6V−65mA
PL908	65T63304F05	Pilot 6V−65mA

Symbol No.	Part No.	Description
Capacitors		
C901	23T74181F37	Chip Tantalum 10 μ F/6.3V
C902	23T74181F12	Chip Tantalum 1 μ F/16V
C903	08S65128F55	Chip 680PF
Resistors	(All resistors are chip 1/8W±5% unless otherwise noted.)	
R901	06S53330F33	150ohm
R902	06S53330F33	150ohm
R903	06S53330F33	150ohm
R904	06S53330F33	150ohm
R905	06S53330F33	150ohm
R906	06S53330F33	150ohm
R907	06S53330F33	150ohm
R908	06S53330F33	150ohm
R909	06S53330F33	150ohm
R910	06S64995F19	39ohm 1/16W
R911	06S64995F19	39ohm 1/16W
R912	06S64995F19	39ohm 1/16W
R913	06S64995F19	39ohm 1/16W
R914	06S64995F19	39ohm 1/16W
R915	06S64995F19	39ohm 1/16W
R916	06S64995F33	150ohm 1/16W
R917	06S64995F33	150ohm 1/16W
R918	06S64995F33	150ohm 1/16W
R919	06T70072F55	1.2Kohm 1/4W
R920	06S53331F26	1Mohm
R921	06S64995F93	47Kohm1/16W
R922	06T70072F55	1.2Kohm1/4W
VR401-1 VR401-2	18T81894F01	Variable SLID 100Kohm-B
VR402-1 VR402-2	18T81894F01	Variable SLID 100Kohm-B
Photo B P.C. Board		
Transistors/LED		
PT660	48T73605F01	Photo PH102
LD650	48T69249F01	LED, SLP-935A-50A (RED)

Symbol No.	Part No.	Description
Miscellaneous		
BZ650	50T72766F01	Buzzer
C820	08T74199F01	Capacitor, Through
E1	09C40957T10	Receptacle Antenna
E401	01T72764F01	Input DIN Connector
E402	01T74179F01	Output DIN Connector
E801	01T72760F04	Assy, Ignition Cable
HD1	88T73604F01	Head, Unit-K
LCD901	65T81737F01	LCD, 7902
M650	01V74100F23	Assy, Motor
PT661	48T73605F01	Transistor, Photo, PH102
S651	40T71647F01	Switch Micro D2A (DOOR)
S652	40T71647F02	Switch Micro D2A (END)
SD650	01T73602F01	Assy, Solenoid

Note: ● : 7902 model only, ▲ : 7902F model only,
■ : 7902E model only, Others : Common

Cabinet Assembly Parts List

NOTE: The parts without part number are not supplied.

Symbol	No.	Index	Part No.	Description
●	1	5-A	13D74201F02	Assy, Nosepiece (7902)
■	1	5-A	13D74201F03	Assy, Nosepiece (7902E)
▲	1	5-A	13D74201F05	Assy, Nosepiece (7902F)
	3	1-E	15C73492F02	Cover, Top
	5	5-A	36B67959F02	Knob, Slide
	6	5-A	36A74202F01	Knob, Control (A)
	7	5-A	36A74203F01	Knob, Control (B)
	8		03S44205G07	Screw, Pan (M2.6×5)
	9		03S44205G30	Screw, Pan (M2.6×4)
	10		03S44205G42	Screw, Pan (M2.6×4)
	14	4-F	30C74188F02	Parallel Wire (10PC−C)
	15	3-D	15A74616F01	Cover, Dust
	16	5-F	15A81953F01	Cover, Shield (Main)
	17	1-B	43A68205F01	Bush, DK
	19	2-C	03S72235F12	Screw, Countersink (M2.6×8)
	21	4-C	75S72374F56	Cushion Rubber
	22	3-C	04A43020G05	Washer, Flat (M9.2)
	23		03S44205G05	Screw, Pan (M3×5)
	24		04A66026F03	Washer, Flat (M3.2)
	25	1-E	56S60912F13	Label, Round−STD
	27	1-G	15T82269F01	Cover, DIN Connector. (8P)
	28	5-D	75A81741F01	Cushion, Buzzer
	29	4-F	30C74188F01	Parallel Wire (10PC−C)
	31	4-G	30T73687F04	Parallel Wire (4P−30)
	32	3-G	77T68726F01	FM Tuner Unit (TFFE3U114B) (FE001)
	33	2-F	30C44673J68	C.W. Shield
	35	3-C	30C74188F03	Parallel Wire (4PC−C)
	36	2-C	84T81312F01	FPC RF P.C.Board
	37	2-C	84T81313F01	FPC Actuate P.C.Board
	42	2-B	03S44205G33	Screw, Pan (M2.6×8)
	44	2-C	75A81740F01	Rubber, TR
	45	4-C	75T65533F02	Rubber, Electric
	46	4-B	61A74197F01	Lens, LCD
	47	4-B	15A74198F01	Cover, LCD
	48	4-B	84T74185F01	FPC Bass P.C.Board
	49	4-B	84T74186F01	FPC Trebe P.C.Board
	50	4-B	26A74208F01	Reflector Film
	51	5-C	30C74188F06	Parallel Wire (21P S−S)
	52	5-C	30C74188F10	Parallel Wire (6P S−S)
	56	3-C	01V74200F31	Assy, D/D Unit
	57	3-B	01V83100F37	Assy, Front Panel
	58	3-G	03S40036U02	Screw, W/Washer (M3×8)
	59	3-G	46A81395F01	Stud Pin
	61		07A80815F01	Assy, Stopper Bracket
	62	1-C	03S40011G05	Screw, Countersink (M2.6×5)
	63	3-B	14A82373F01	Insulator, Cover

Note: ● : 7902 model only, ▲ : 7902F model only,
■ : 7902E model only, Others : Common

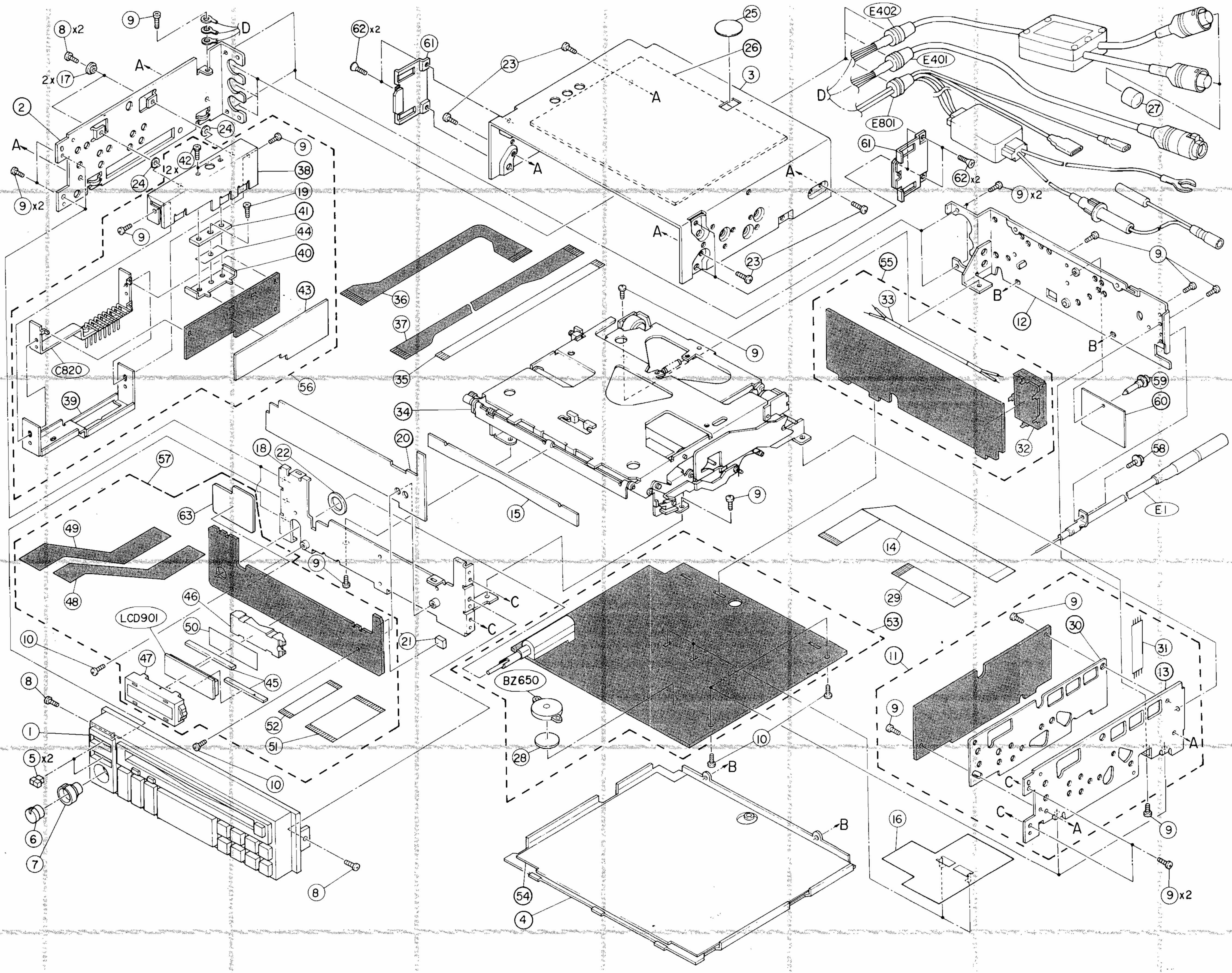
Mechanism Assembly Parts List

Symbol No.	Index	Part No.	Description
201	4-E	43A73633F01	Spacer, Arm Roller
202	5-E	43A73634F01	Spacer, Arm Disc Guid
203		03D40014G07	Screw, W/Washer (M2×4)
204	4-E	03D40014G61	Screw, W/Washer (M2×5)
205	5-B	45C73561F01	Lever, Door Rack
206	4-B	41B73641F03	Spring, Pull
207	3-C	44A73591F01	Gear, Door (A)
208		04A41345P01	Washer, Lock (M1.2)
209	5-E	44B73593F01	Rack, Down
210	5-C	44A73590F01	Gear, Down
211	5-C	41A73571F01	Spring, Clutch
212	5-C	04C42091G12	Ring "E" (M1.2)
213	4-C	41B73641F04	Spring, Pull
214	5-E	41B73641F05	Spring, Pull
215	3-B	41A73639F01	Spring, Roller Down
216		04S40075G07	Washer, Polyslider (M2.1)
217		04A41345P02	Washer, Lock (M1.7)
218		03S44205G68	Screw, Pan (M2×4)
219	2-B	75S72374F50	Cushion Rubber
221		03S68259F22	Screw, Pan (M2×3)
222	1-D	41A73639F01	Spring, Roller Down
223	2-D	41B73641F07	Spring, Pull
224		41B73641F08	Spring, Pull
225	1-G	41B73641F09	Spring, Pull
226		29C41045P09	Lug, Wrap Around
227	2-B	41B73641F01	Spring, Pull
228	3-B	01A73891F01	Assy, Rivet Gear Down
229	1-D	01A73892F01	Assy, Rivet Arm Roller
232	3-D	15C73585F01	Cover, Disc Guide
233		03S44205G14	Screw, Pan (M2×5)
234		49A73582F01	Roller
235	2-D	47A73606F01	Shaft, Roller
236		04A41345P06	Washer, Lock (M2.1)
237	5-C	44A73592F01	Gear, Door (B)
238	5-C	45A73581F01	Arm, Cover Door
239	5-C	15B73562F01	Cover, Door
240	4-C	41A73640F01	Spring, Door
241	5-C	47A73608F01	Shaft, Door
242	2-D	43A73632F01	Spacer, Door Stopper
243	3-F	03S68259F27	Screw, Pan (M1.7×3.5)

Symbol No.	Index	Part No.	Description
244		04A41345P19	Washer, Lock (M1.7)
246	2-D	03D40014G02	Screw, W/Washer (M2×6)
247	3-B	45A73578F01	Lever, Lock (L)
248	4-D	41B73641F06	Spring, Pull
249	3-D	04S40075G03	Washer, Polyslider (M1.7)
251	2-E	07A73573F01	Support, Clamp
252	5-D	43A73635F01	Roller, Door Stopper
253	5-C	04A41345P11	Washer, Lock (M1.2)
254	4-D	01A73895F01	Assy, Rivet Door Stop
255	2-C	01A73894F01	Assy, Rivet Lever Lock
256	2-D	84A73595F01	Switch P.C.B
257		03S68259F12	Screw, Pan (M2×2.5)
258	5-D	44A73587F01	Gear, Loading (A)
259	5-D	44A73588F01	Gear, Loading (B)
260		43A73636F01	Bushing, Roller
261	4-D	49A73583F01	Roller, Loading
262		04S40075F13	Washer, Polyslider (M3.1)
263	3-E	01A73896F01	Assy, Rivet Arm Guide
264	5-F	01V74200F30	Assy, Load P.C.B
265	6-D	44A73589F01	Gear, Roller
266	5-D	47A73607F01	Shaft, Roller (G)
267	5-D	01A73897F01	Assy, Arm Gear Down
268	5-E	03C42723U06	Screw, Cup (M2.6×5)
270	5-E	03S43997P33	Screw, Bind (M2×6)
271		29C41045P08	Lug, Wrap Around
273		01B73601F01	Assy,Damper
274	4-F	84A73596F01	Switch P.C.B
276	1-H	47A73609F01	Shaft, Clamp
277		04C42091G06	Ring "E" (M1.5)
278	3-F	41B73641F02	Spring, Pull
279		15A73594F01	Cover, Dumper
280	2-H	43A81490F01	Spacer, Mechanical Lock
282	1-H	04A41345P08	Washer, Lock (M1.7)
283	3-F	01A73899F01	Assy, Bracket Head (L)
284	2-G	01A73901F01	Assy, Bracket Head (R)
285	2-E	43A41006F01	Spacer, Polyslider
286	2-E	03S68259F11	Screw, Pan (M1.7×2)
287	3-E	01A73902F01	Assy, Rivet Arm Clamp
288	2-F	01V74400F79	Assy, Disc Clamp
292	4-F	30C74188F04	Parallel wire (12P)

NOTE: The parts without part numbers are not supplied.

Exploded View (Cabinet)



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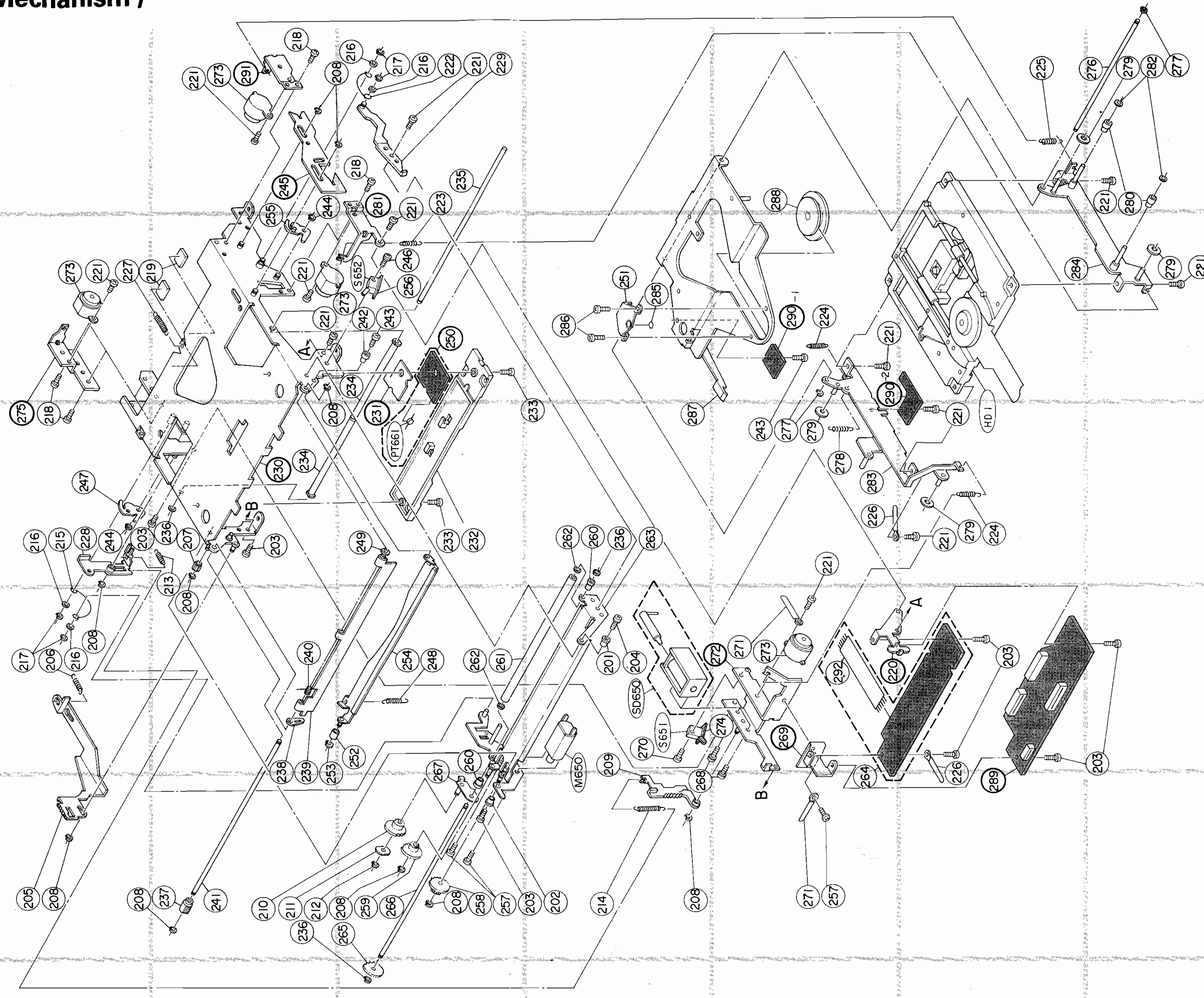
Exploded View (Mechanism)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223
235
221
273
S652
246
256
221
242
243
250
273
221
227
219
275
218
A
234
208
231
PT661
233
230
234
B
247
216
215
228
244
203
236
207
203
233
232
213
208
249
217
206
216
208
240
254
248
262
261
262
260
236
263
201
204
SD650
238
239
253
252
267
260
M650
209
270
S651
274
268
272
271
273
269
292
220
264
226
289
203
203
221
A
B
205
208
208
237
241
210
211
212
208
259
266
208
258
257
203
202
214
208
271
257
236
265
286
251
285
288
290-1
224
287
221
290-2
221
HD1
243
277
279
278
283
226
221
279
224
225
276
279
282
277
221
280
284
279
221

Packing Assembly Parts List

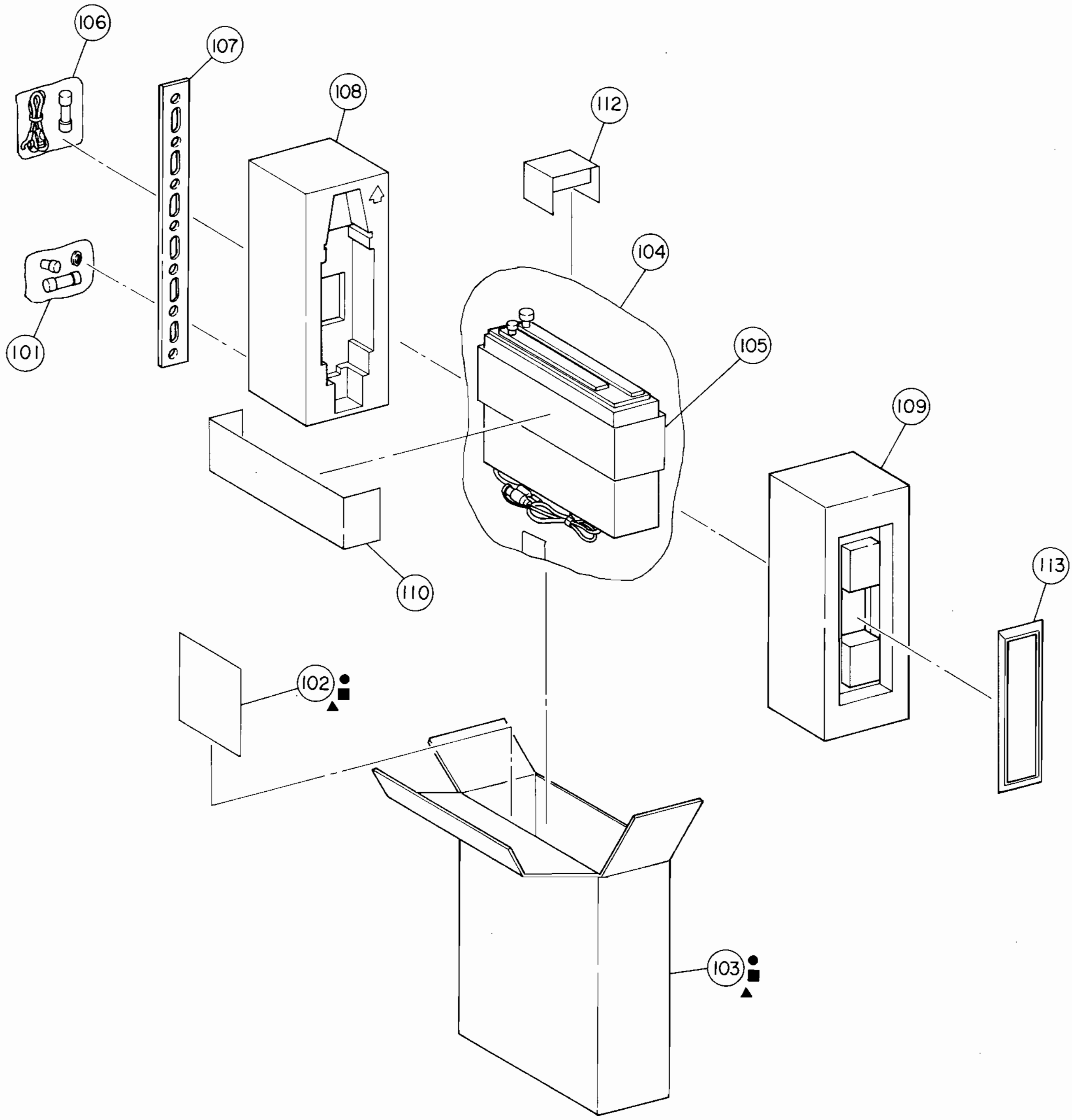
NOTE: The parts without part numbers are not supplied.

Symbol No.	Part No.	Description
101	01V74200F34	Assy, Kit Installation
■ 101-1	03B44963F01	Bolt,Hex W/Washer (M4×8)
▲ 101-1	03B44963F01	Bolt,Hex W/Washer (M4×8)
■ 101-2	03S63857F05	Screw, Tapping (M5×15)
▲ 101-2	03S63857F05	Screw, Tapping (M5×15)
■ 101-3	03B44963F02	Bolt, Hex W/Washer (M5×20)
▲ 101-3	03B44963F02	Bolt, Hex W/Washer (M5×20)
■ 101-4	02B47353F01	Nut, Hex (M5)
▲ 101-4	02B47353F01	Nut, Hex (M5)
■ 101-5	03S52360F37	Screw, Countersink (M4×8)
▲ 101-5	03S52360F37	Screw, Countersink (M4×8)
■ 101-6	65A40348G04	Fuse, 3A
▲ 101-6	65A40348G04	Fuse, 3A
■ 101-7	46A42363F01	Stud, Bolt
▲ 101-7	46A42363F01	Stud, Bolt
■ 101-8	45A41684U01	Arm, Adapter
▲ 101-8	45A41684U01	Arm, Adapter
■ 101-9	04S40070G55	Washer, Flat (M6)
▲ 101-9	04S40070G55	Washer, Flat (M6)
● 102	01V81300F72	Assy, Pamphlet
■ 102	68P80130F28	Owners Manual
▲ 102	68P81707F40	Owners Manual
● 103	56S80201F01	Carton Packing.(Individual)
■ 103	56S80201F02	Carton, Packing (Individual)
▲ 103	56S80201F32	Carton, Packing (Individual)
104	56B40990T18	Sack, Polyethylene
105	15C80814F01	Case Inner
106	01V81300F84	Assy, Kit, Bracket
106-1	07A80820F01	Bracket, Hand
106-1	07A80820F01	Bracket, Hand
107	07B64552F01	Bracket Strap Receiver
108	56D82674F01	Tray, Packing (L)
109	56D82674F02	Tray, Packing (R)
110	56A65131F02	Pad, Sheet
112	56A81396F01	Pad, Packing
113	33B81462F01	Face Plate

Symbol No.	Part No.	Description

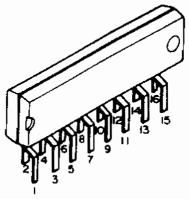
Note: ● : 7902 model only, ▲ : 7902F model only,
■ : 7902E model only, Others : Common

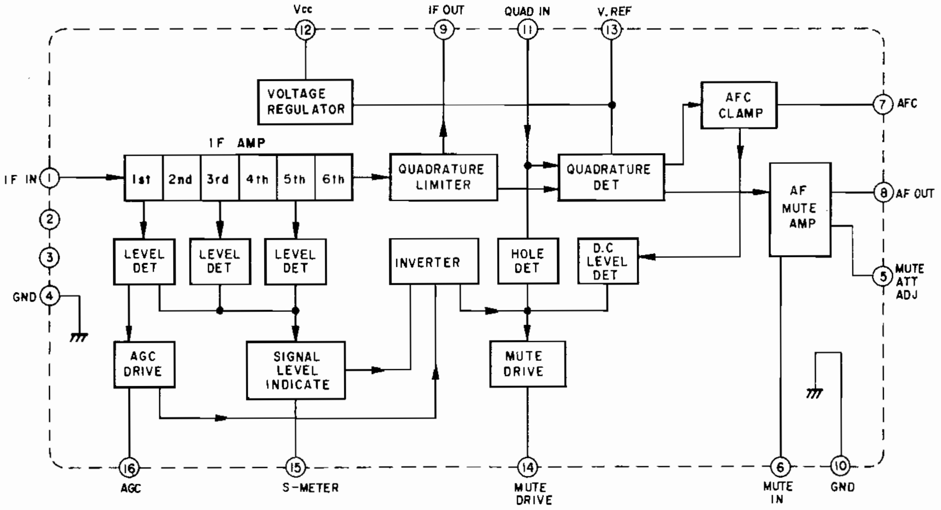
Packing Method View


106
107
108
112
104
105
101
109
110
113
102 ● ■ ▲
103 ● ■ ▲

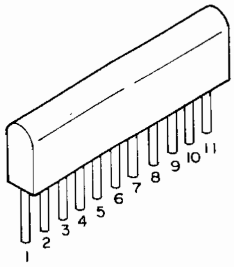
Semi-Conductor Lead Identifications

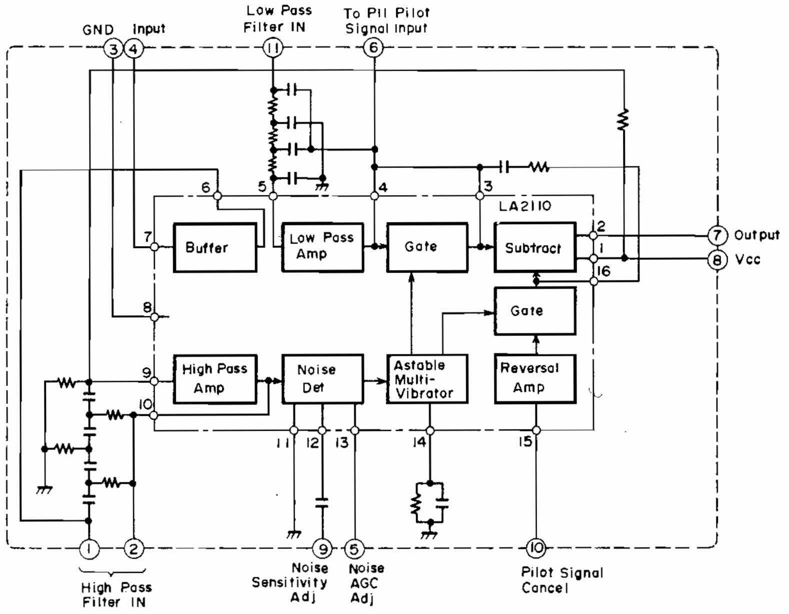
LA1140: IC1


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

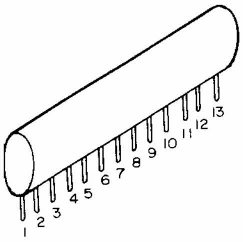

Vcc
12
IF OUT
9
QUAD IN
11
V.REF
13
VOLTAGE REGULATOR
AFC CLAMP
7 AFC
IF AMP
IF IN 1
1st
2nd
3rd
4th
5th
6th
QUADRATURE LIMITER
QUADRATURE DET
AF MUTE AMP
8 AF OUT
2
3
GND 4
LEVEL DET
LEVEL DET
LEVEL DET
INVERTER
HOLE DET
D.C LEVEL DET
5 MUTE ATT ADJ
AGC DRIVE
SIGNAL LEVEL INDICATE
MUTE DRIVE
16
AGC
15
S-METER
14
MUTE DRIVE
6
MUTE IN
10
GND

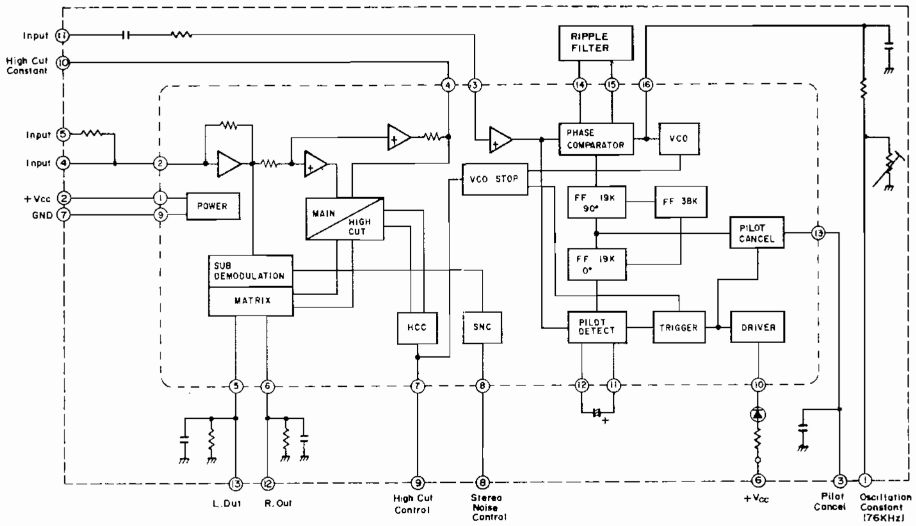
NC3S300: IC2


1
2
3
4
5
6
7
8
9
10
11

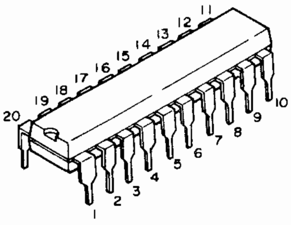

GND
Input
3
4
Low Pass Filter IN
11
To Pll Pilot Signal Input
6
LA2110
6
5
4
3
7
Buffer
Low Pass Amp
Gate
Subtract
12
1
16
7 Output
8 Vcc
8
Gate
9
High Pass Amp
Noise Det
Astable Multi-Vibrator
Reversal Amp
10
11
12
13
14
15
1
2
High Pass Filter IN
9
5
Noise Sensitivity Adj
Noise AGC Adj
10
Pilot Signal Cancel

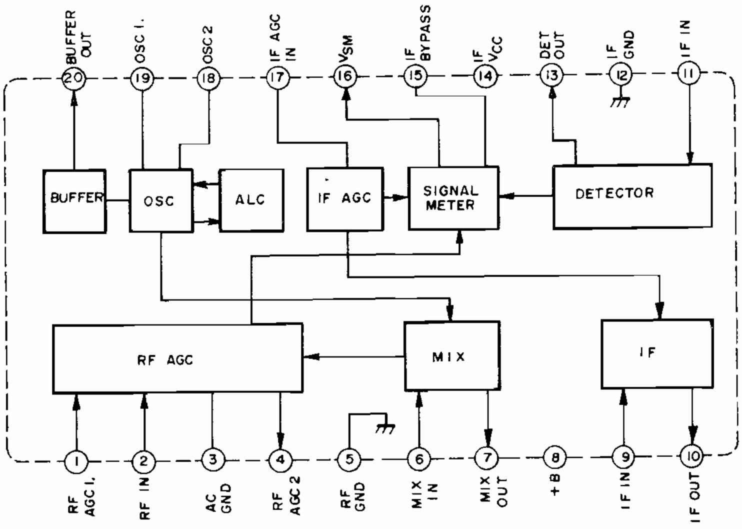
MX3S400: IC3


1
2
3
4
5
6
7
8
9
10
11
12
13

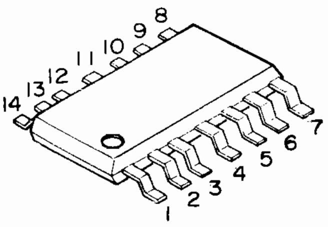

Input 11
High Cut Constant 10
Input 5
Input 4
+Vcc 2
GND 7
RIPPLE FILTER
PHASE COMPARATOR
VCO
VCO STOP
POWER
MAIN
HIGH CUT
SUB DEMODULATION
MATRIX
FF 19K 90°
FF 38K
FF 19K 0°
PILOT CANCEL
HCC
SNC
PILOT DETECT
TRIGGER
DRIVER
L. Out
R. Out
High Cut Control
Stereo Noise Control
+Vcc
Pilot Cancel
Oscillation Constant (76KHz)

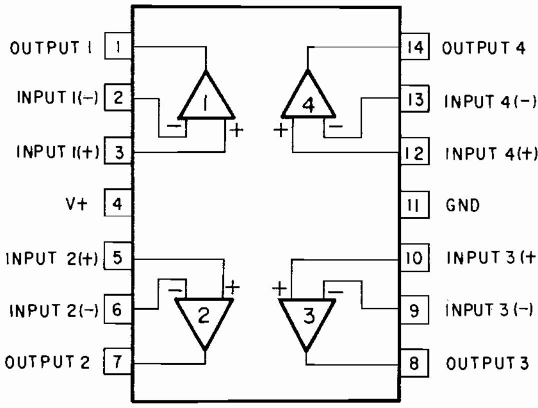
LA1135: IC101


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

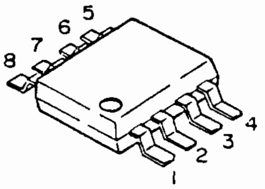

BUFFER OUT 20
OSC 1. 19
OSC 2 18
IF AGC IN 17
VSM 16
IF BYPASS 15
IF VCC 14
DET OUT 13
IF GND 12
IF IN 11
BUFFER
OSC
ALC
IF AGC
SIGNAL METER
DETECTOR
RF AGC
MIX
IF
RF AGC 1. 1
RF IN 2
AC GND 3
RF AGC 2 4
RF GND 5
MIX IN 6
MIX OUT 7
+B 8
IF IN 9
IF OUT 10

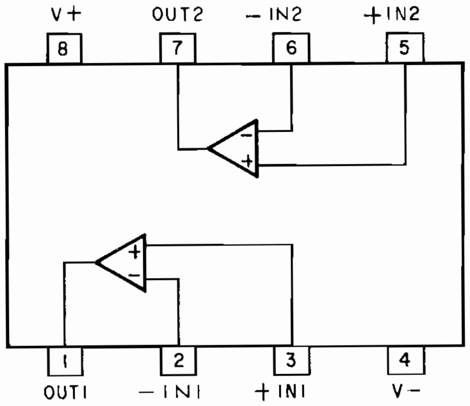
NJM2902: IC201, 202
NJM2060: IC403


1
2
3
4
5
6
7
8
9
10
11
12
13
14

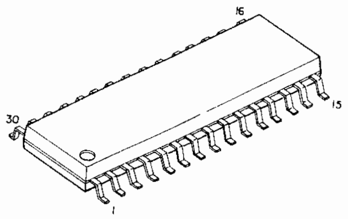

OUTPUT 1 1
INPUT 1(−) 2
INPUT 1(+) 3
V+ 4
INPUT 2(+) 5
INPUT 2(−) 6
OUTPUT 2 7
OUTPUT 3 8
INPUT 3(−) 9
INPUT 3(+) 10
GND 11
INPUT 4(+) 12
INPUT 4(−) 13
OUTPUT 4 14
1
2
3
4
−
+

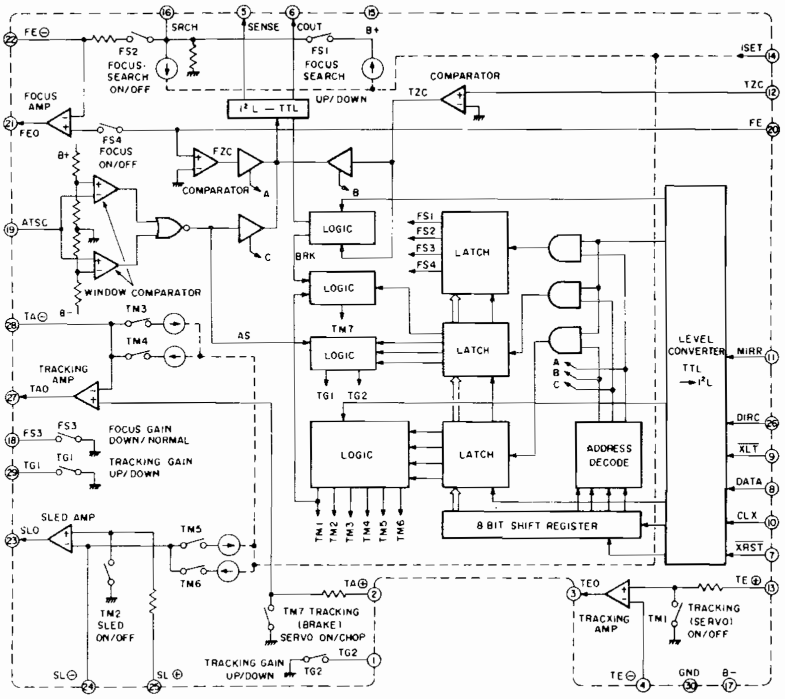
NJM2904M: IC203
NJM072M: IC205



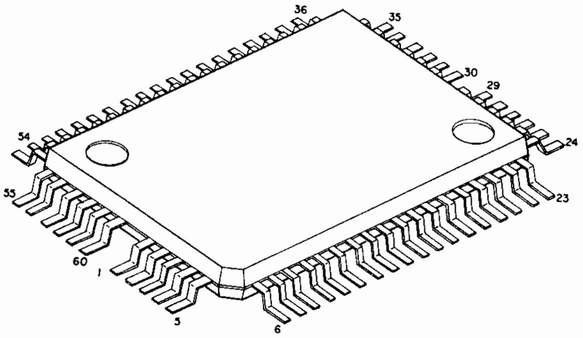

V+
OUT2
−IN2
+IN2
8
7
6
5
1
2
3
4
OUT1
−IN1
+IN1
V−

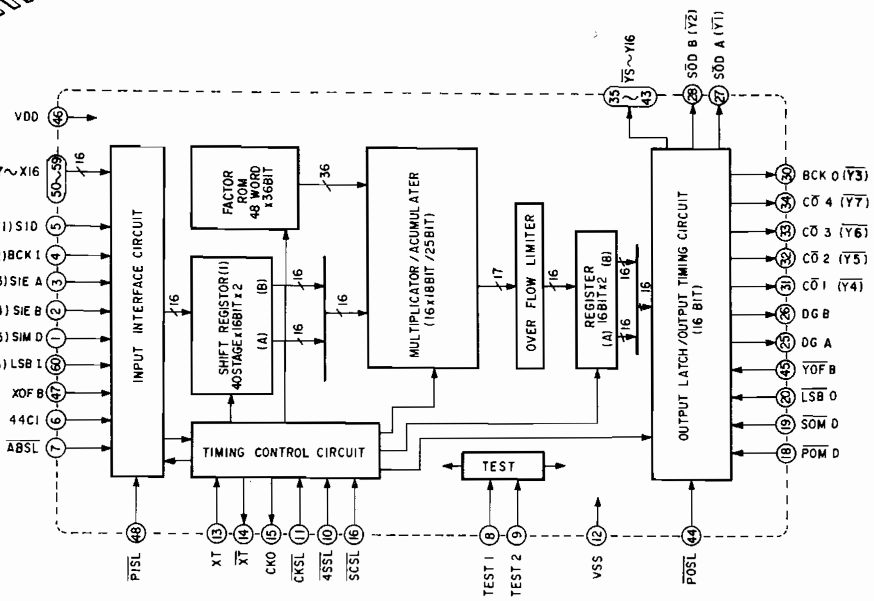
CX20108: IC204



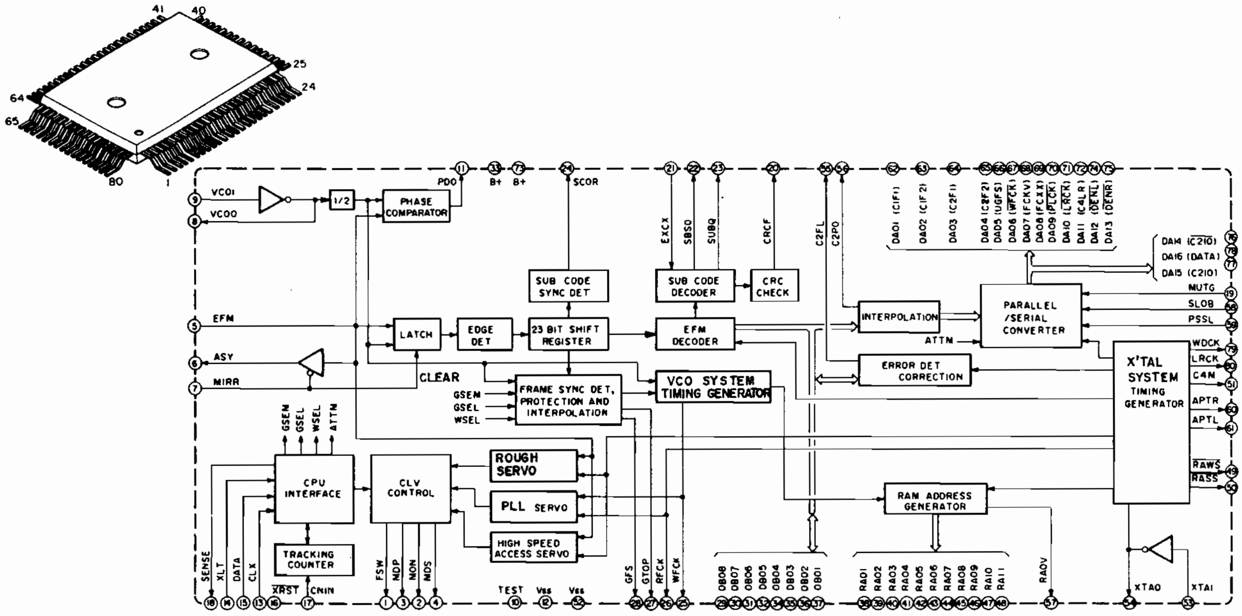

SRCH
SENSE
COUT
B+
FE⊖
FS2
FOCUS-SEARCH ON/OFF
FS1
FOCUS SEARCH
UP/DOWN
I²L — TTL
COMPARATOR
TZC
ISET
TZC
FE
FOCUS AMP
FEO
FS4
FOCUS ON/OFF
FZC
COMPARATOR
A
B
B+
ATSC
LOGIC
BRK
C
FS1
FS2
FS3
FS4
LATCH
WINDOW COMPARATOR
TA⊖
B−
TM3
TM4
LOGIC
TM7
AS
LOGIC
LATCH
LEVEL CONVERTER
TTL → I²L
MIRR
TRACKING AMP
TAO
TG1
TG2
A
B
C
FS3
FOCUS GAIN DOWN/NORMAL
TG1
TRACKING GAIN UP/DOWN
LOGIC
LATCH
ADDRESS DECODE
DIRC
XLT
DATA
SLED AMP
SLO
TM5
TM6
TM1
TM2
TM3
TM4
TM5
TM6
8 BIT SHIFT REGISTER
CLK
XRST
TA⊕
TE⊕
TEO
TM2 SLED ON/OFF
TM7 TRACKING (BRAKE) SERVO ON/CHOP
TG2
TRACKING AMP
TM1
TRACKING (SERVO) ON/OFF
TRACKING GAIN UP/DOWN
TG2
SL⊖
SL⊕
TE⊖
GND
B−
22
16
5
6
15
14
12
21
20
19
28
11
27
18
29
26
9
8
23
10
7
2
3
13
1
24
25
4
30
17

SM5802A: IC206

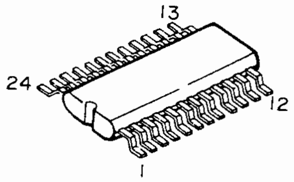

36
35
30
29
24
23
54
55
60
1
5
6

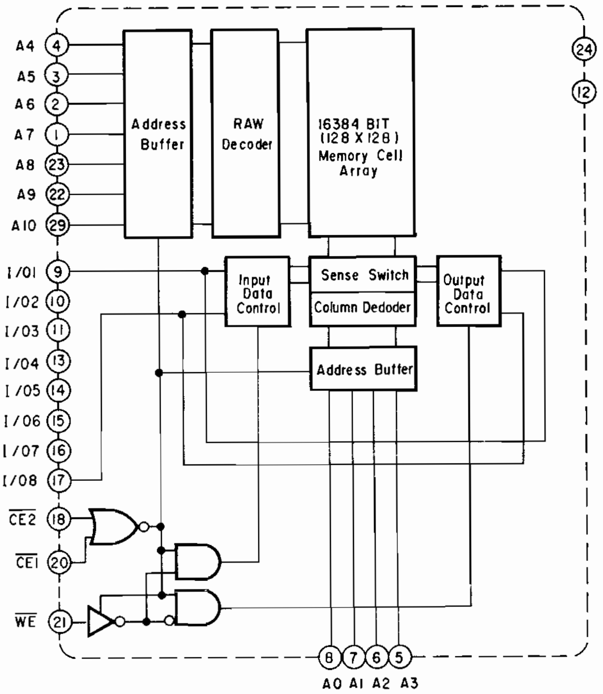

VDD 46
X7~X16 50~59
(X1) SID 5
(X2) BCK I 4
(X3) SIE A 3
(X4) SIE B 2
(X5) SIM D 1
(X6) LSB I 60
XOF B 47
44CI 6
ABSL 7
INPUT INTERFACE CIRCUIT
FACTOR ROM 48 WORD x36BIT
SHIFT REGISTOR (1) 40STAGE x 16BIT x 2 (A) (B)
MULTIPLICATOR / ACUMULATER (16x18BIT / 25BIT)
OVER FLOW LIMITER
REGISTER (A) 16BIT x 2 (B)
OUTPUT LATCH / OUTPUT TIMING CIRCUIT (16 BIT)
TIMING CONTROL CIRCUIT
TEST
16
36
17
35 ~ 43 Y5~Y16
28 SOD B (Y2)
27 SOD A (Y1)
30 BCK O (Y3)
34 CO 4 (Y7)
33 CO 3 (Y6)
32 CO 2 (Y5)
31 CO 1 (Y4)
26 DG B
25 DG A
45 YOF B
20 LSB O
19 SOM D
18 POM D
48 PISL
13 XT
14 XT
15 CKO
11 CKSL
10 4SSL
16 SCSL
8 TEST 1
9 TEST 2
12 VSS
44 POSL

CX23035: IC207

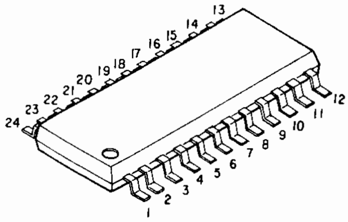

41
40
25
24
64
65
80
1
VCOI 9
VCOO 8
1/2
PHASE COMPARATOR
PDO 11
B+ 33
B+ 73
SCOR 24
EXCX 21
SBSO 22
SUBQ 23
CRCF 20
C2FL 55
C2PO 56
EFM 5
ASY 6
MIRR 7
LATCH
EDGE DET
23 BIT SHIFT REGISTER
SUB CODE SYNC DET
SUB CODE DECODER
CRC CHECK
EFM DECODER
CLEAR
GSEM
GSEL
WSEL
FRAME SYNC DET, PROTECTION AND INTERPOLATION
VCO SYSTEM TIMING GENERATOR
INTERPOLATION
ATTM
ERROR DET CORRECTION
PARALLEL /SERIAL CONVERTER
X'TAL SYSTEM TIMING GENERATOR
RAM ADDRESS GENERATOR
GSEN
GSEL
WSEL
ATTN
CPU INTERFACE
CLV CONTROL
ROUGH SERVO
PLL SERVO
HIGH SPEED ACCESS SERVO
TRACKING COUNTER
SENSE 18
XLT 14
DATA 15
CLK 13
XRST 16
CNIN 17
FSW 1
NDP 3
MON 2
MDS 4
TEST 10
Vss 12
Vss 52
GFS 28
GTOP 27
RFCK 26
WFCK 25
DB08 29
DB07 30
DB06 31
DB05 32
DB04 34
DB03 35
DB02 36
DB01 37
RA01 38
RA02 39
RA03 40
RA04 41
RA05 42
RA06 43
RA07 44
RA08 45
RA09 46
RA10 47
RA11 48
RAOV 57
XTAO 54
XTAI 53
DA01 (C1F1) 62
DA02 (C1F2) 63
DA03 (C2F1) 64
DA04 (C2F2) 65
DA05 (UGFS) 66
DA06 (WFCK) 67
DA07 (FCKV) 68
DA08 (FCXX) 69
DA09 (PLCK) 70
DA10 (LRCK) 71
DA11 (C4LR) 72
DA12 (DENL) 74
DA13 (DENR) 75
DA14 (C210) 76
DA16 (DATA) 78
DA15 (C210) 77
MUTG 19
SLOB 58
PSSL 59
WDCK 79
LRCK 80
C4M 51
APTR 60
APTL 61
RAWS 49
RASS 50

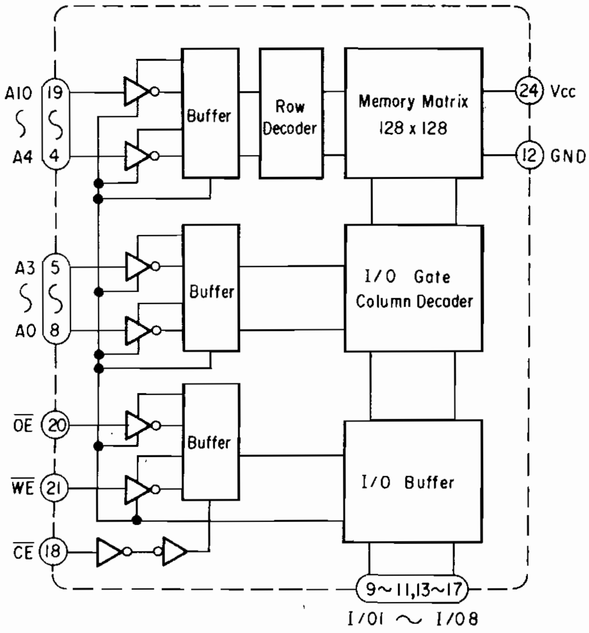
μPD449G: IC208



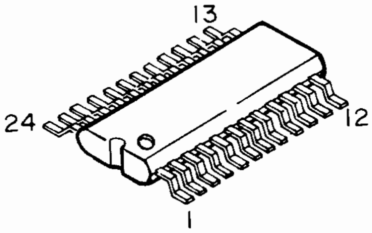

A4 4
A5 3
A6 2
A7 1
A8 23
A9 22
A10 29
I/01 9
I/02 10
I/03 11
I/04 13
I/05 14
I/06 15
I/07 16
I/08 17
CE2 18
CE1 20
WE 21
Address Buffer
RAW Decoder
16384 BIT (128 X 128) Memory Cell Array
24 Vcc
12 GNO
Input Data Control
Sense Switch
Column Dedoder
Output Data Control
Address Buffer
8 7 6 5
A0 A1 A2 A3

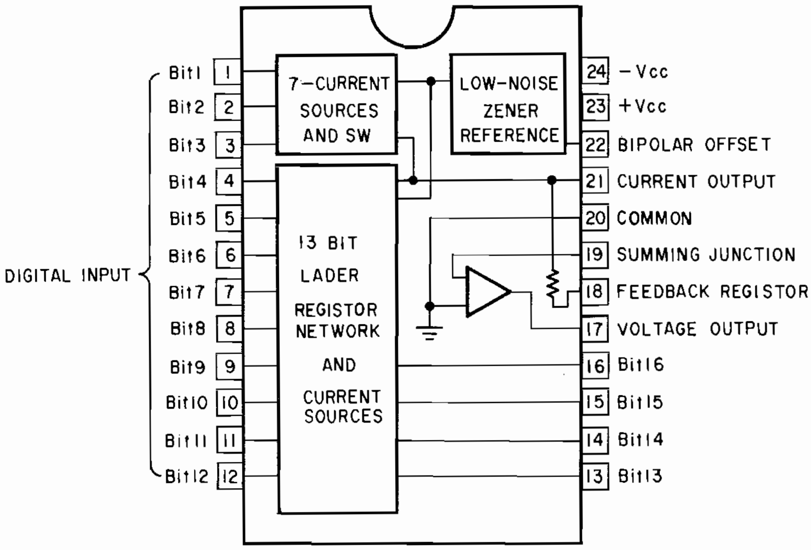
CK5816M: IC208


13
14
15
16
17
18
19
20
21
22
23
24
12
11
10
9
8
7
6
5
4
3
2
1

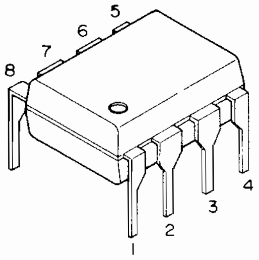

A10 19
A4 4
A3 5
A0 8
OE 20
WE 21
CE 18
Buffer
Buffer
Buffer
Row Decoder
Memory Matrix 128 x 128
I/O Gate Column Decoder
I/O Buffer
24 Vcc
12 GND
9~11,13~17
I/01 ~ I/08

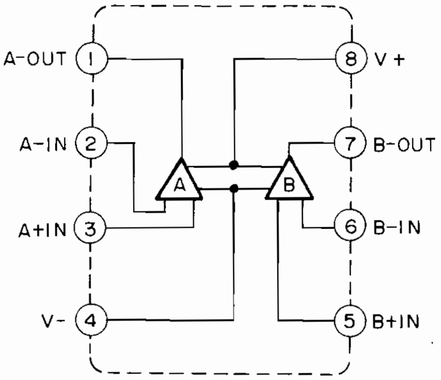
PCM55: IC209



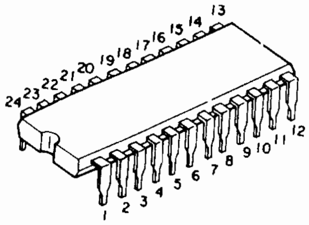

DIGITAL INPUT
Bit1 1
Bit2 2
Bit3 3
Bit4 4
Bit5 5
Bit6 6
Bit7 7
Bit8 8
Bit9 9
Bit10 10
Bit11 11
Bit12 12
7-CURRENT SOURCES AND SW
LOW-NOISE ZENER REFERENCE
13 BIT LADER REGISTOR NETWORK AND CURRENT SOURCES
24 -Vcc
23 +Vcc
22 BIPOLAR OFFSET
21 CURRENT OUTPUT
20 COMMON
19 SUMMING JUNCTION
18 FEEDBACK REGISTOR
17 VOLTAGE OUTPUT
16 Bit16
15 Bit15
14 Bit14
13 Bit13

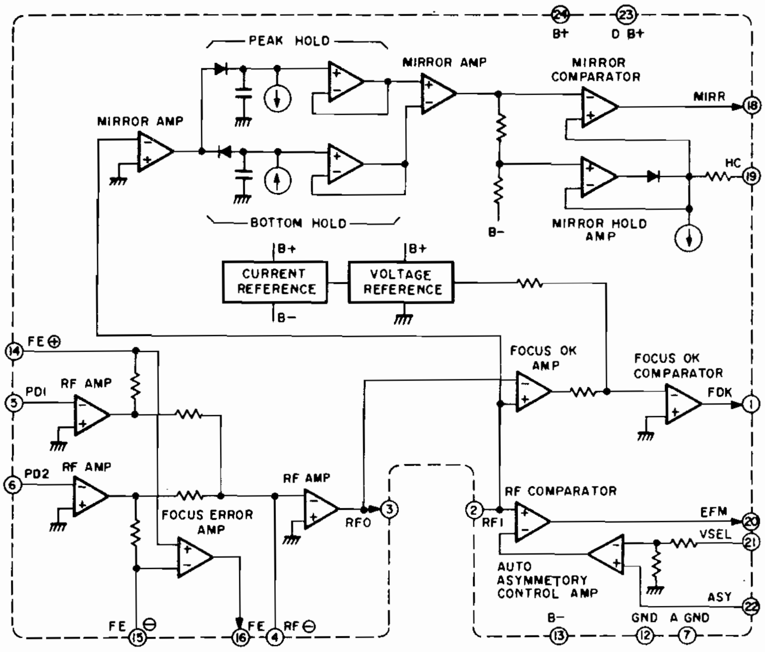
NJM4558: IC301



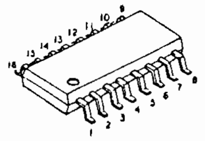

A-OUT 1
A-IN 2
A+IN 3
V- 4
8 V+
7 B-OUT
6 B-IN
5 B+IN
A
B

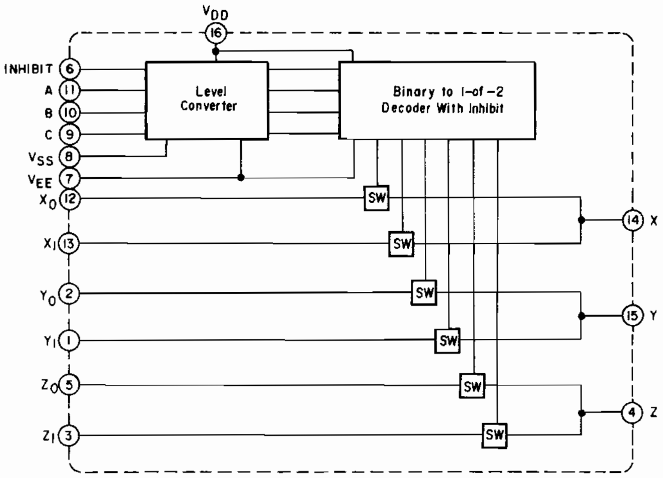
CX20109: IC302


13
14
15
16
17
18
19
20
21
22
23
24
12
11
10
9
8
7
6
5
4
3
2
1

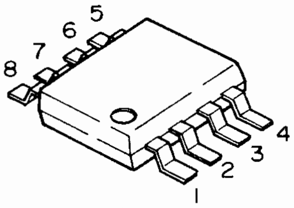

24 B+
23 D B+
PEAK HOLD
MIRROR AMP
MIRROR COMPARATOR
MIRR 18
MIRROR AMP
HC 19
BOTTOM HOLD
B-
MIRROR HOLD AMP
B+
CURRENT REFERENCE
B-
B+
VOLTAGE REFERENCE
14 FE ⊕
5 PD1
RF AMP
6 PD2
RF AMP
FOCUS ERROR AMP
RF AMP
RFO 3
FOCUS OK AMP
FOCUS OK COMPARATOR
FDK 1
2 RF1
RF COMPARATOR
EFM 20
VSEL 21
AUTO ASYMMETORY CONTROL AMP
ASY 22
FE ⊖ 15
FE 16
RF ⊖ 4
B- 13
GND 12
A GND 7

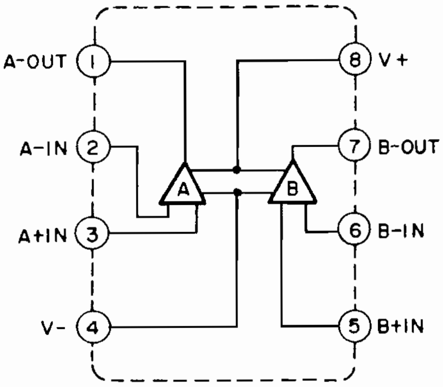
µPD4053BG: IC401


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

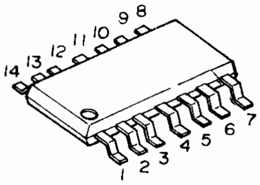

VDD
16
INHIBIT 6
A 11
B 10
C 9
VSS 8
VEE 7
X0 12
X1 13
Y0 2
Y1 1
Z0 5
Z1 3
Level Converter
Binary to 1-of-2 Decoder With Inhibit
SW
14 X
15 Y
4 Z

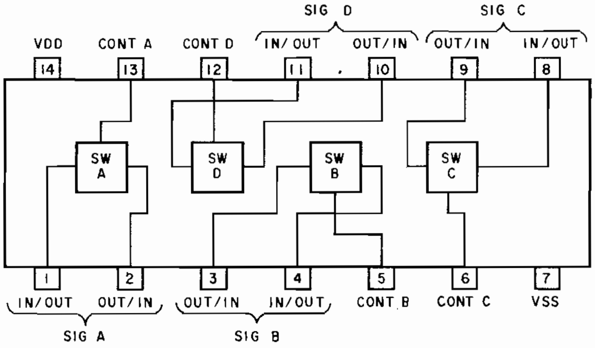
NJM4560:	IC402, 405, 406, 407
NJM5532M:	IC408
BA6903:	IC802
NJM2903M:	IC802



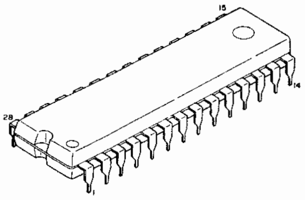

A-OUT 1
A-IN 2
A+IN 3
V- 4
8 V+
7 B-OUT
6 B-IN
5 B+IN
A
B

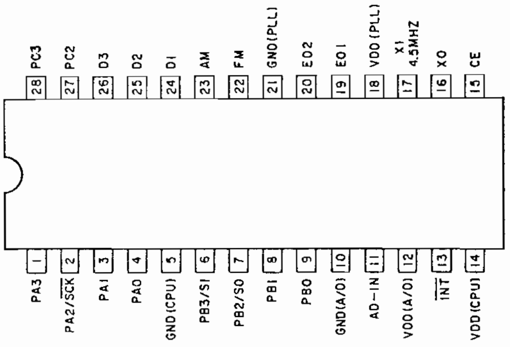
µPD4066BG: IC404


1
2
3
4
5
6
7
8
9
10
11
12
13
14

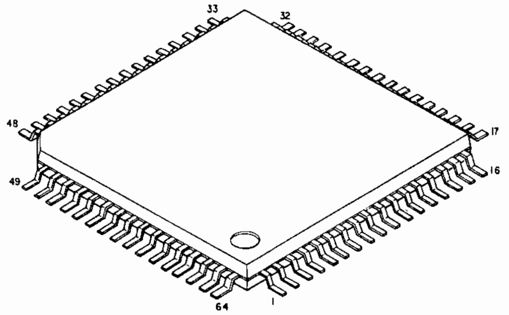

SIG D
SIG C
VDD 14
CONT A 13
CONT D 12
IN/OUT 11
OUT/IN 10
OUT/IN 9
IN/OUT 8
SW A
SW D
SW B
SW C
1 IN/OUT
2 OUT/IN
3 OUT/IN
4 IN/OUT
5 CONT B
6 CONT C
7 VSS
SIG A
SIG B

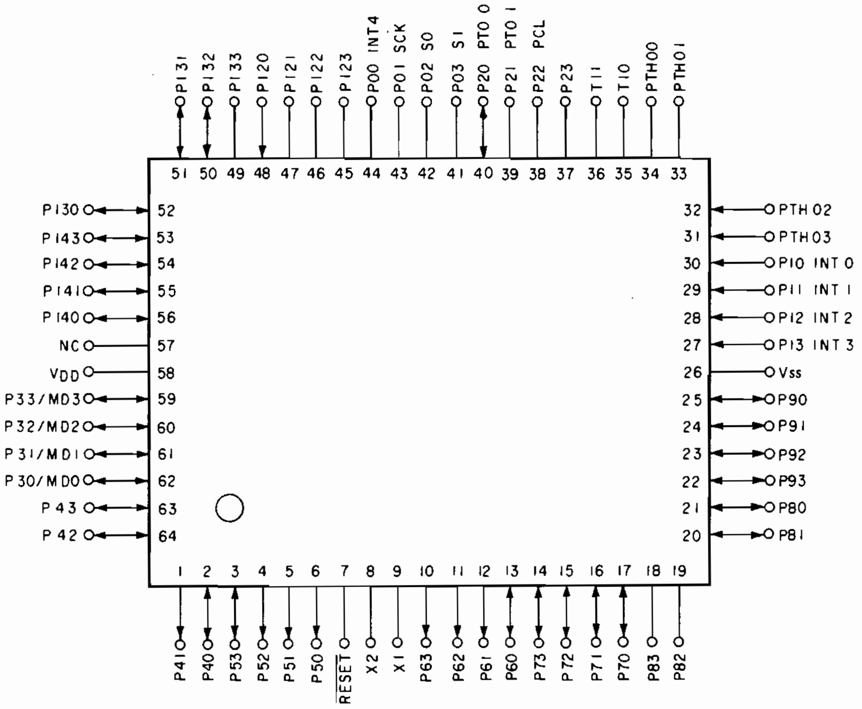
71061F01: IC601



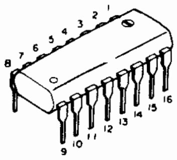

28 PC3
27 PC2
26 D3
25 D2
24 D1
23 AM
22 FM
21 GND(PLL)
20 EO2
19 EO1
18 VDD(PLL)
17 X1 4.5MHZ
16 XO
15 CE
1 PA3
2 PA2/SCK
3 PA1
4 PA0
5 GND(CPU)
6 PB3/SI
7 PB2/SO
8 PB1
9 PB0
10 GND(A/D)
11 AD-IN
12 VDD(A/D)
13 INT
14 VDD(CPU)

74184F01: IC650


33
32
48
17
49
16
64
1


P131 51
P132 50
P133 49
P120 48
P121 47
P122 46
P123 45
P00 INT4 44
P01 SCK 43
P02 SO 42
P03 SI 41
P20 PTO 0 40
P21 PTO 1 39
P22 PCL 38
P23 37
TI1 36
TI0 35
PTH00 34
PTH01 33
P130 52
P143 53
P142 54
P141 55
P140 56
NC 57
VDD 58
P33/MD3 59
P32/MD2 60
P31/MD1 61
P30/MD0 62
P43 63
P42 64
32 PTH02
31 PTH03
30 P10 INT0
29 P11 INT1
28 P12 INT2
27 P13 INT3
26 Vss
25 P90
24 P91
23 P92
22 P93
21 P80
20 P81
1 P41
2 P40
3 P53
4 P52
5 P51
6 P50
7 RESET
8 X2
9 X1
10 P63
11 P62
12 P61
13 P60
14 P73
15 P72
16 P71
17 P70
18 P83
19 P82

μPD4028BG: IC651


1
2
3
4
5
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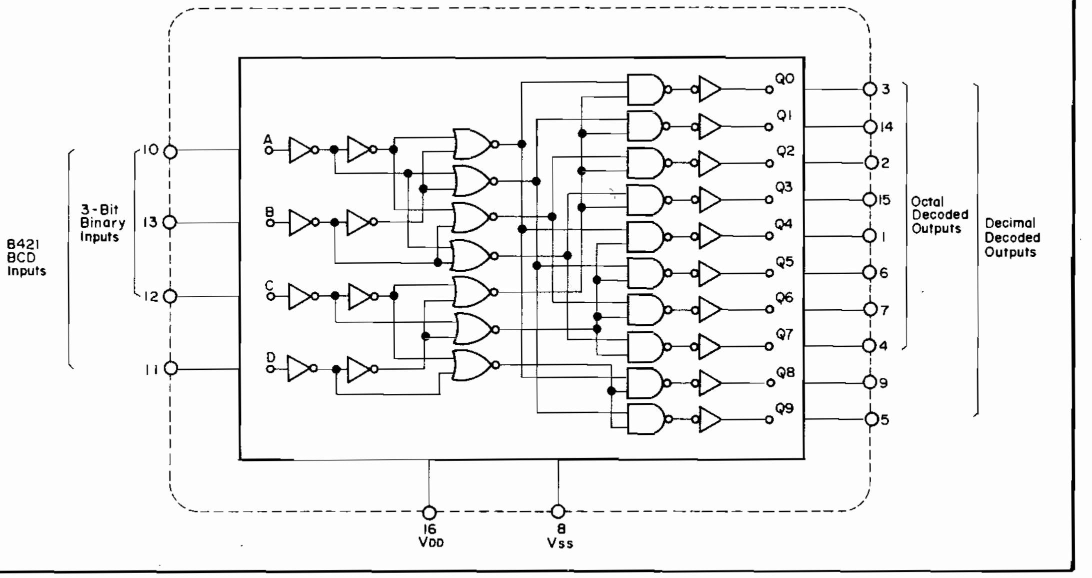
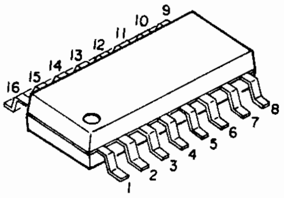
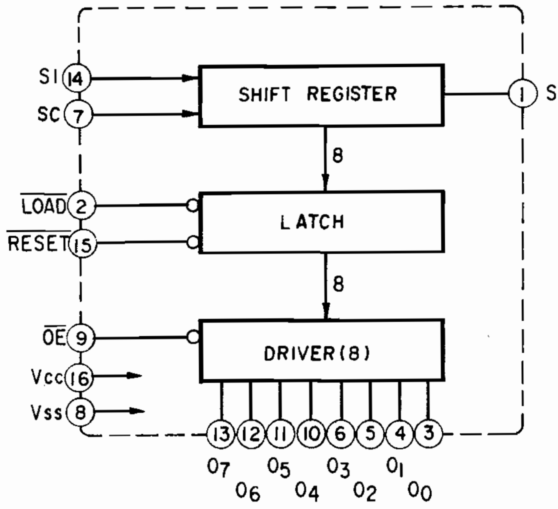
10
11
12
13
14
15
16

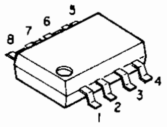

8421 BCD Inputs
3-Bit Binary Inputs
10
13
12
11
A
B
C
D
Q0
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
3
14
2
15
1
6
7
4
9
5
Octal Decoded Outputs
Decimal Decoded Outputs
16 VDD
8 Vss

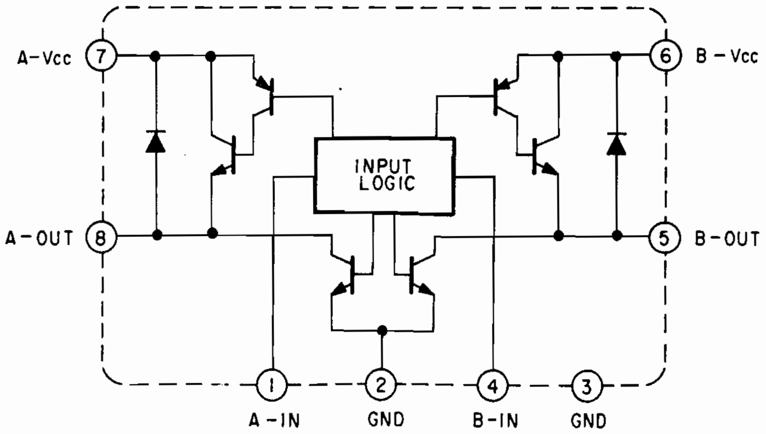
MB88306PF: IC652


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16

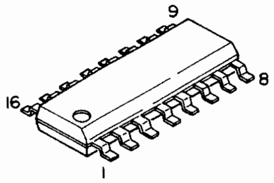

SI 14
SC 7
SHIFT REGISTER
1 SO
8
LOAD 2
RESET 15
LATCH
8
OE 9
DRIVER (8)
Vcc 16
Vss 8
13 12 11 10 6 5 4 3
O7 O5 O3 O1
O6 O4 O2 O0

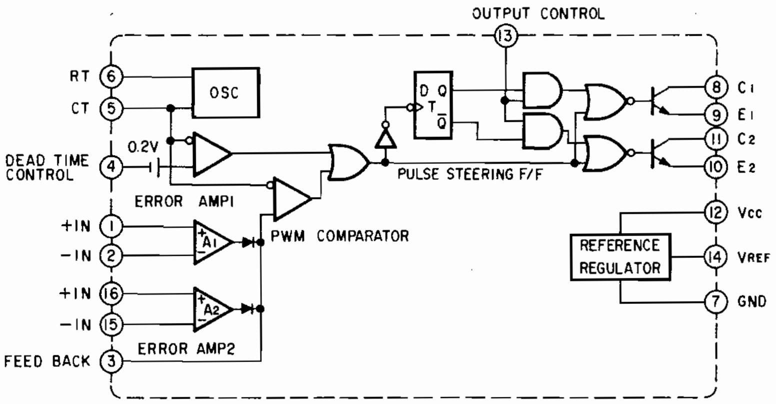
MB3763PF: IC653



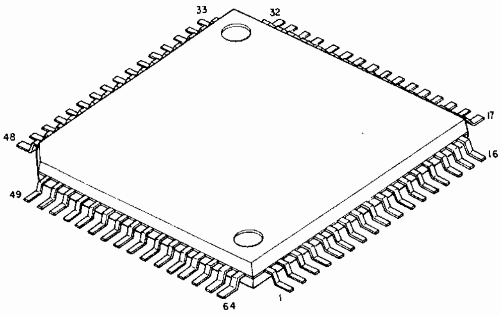

A-Vcc 7
6 B-Vcc
INPUT LOGIC
A-OUT 8
5 B-OUT
1 A-IN
2 GND
4 B-IN
3 GND

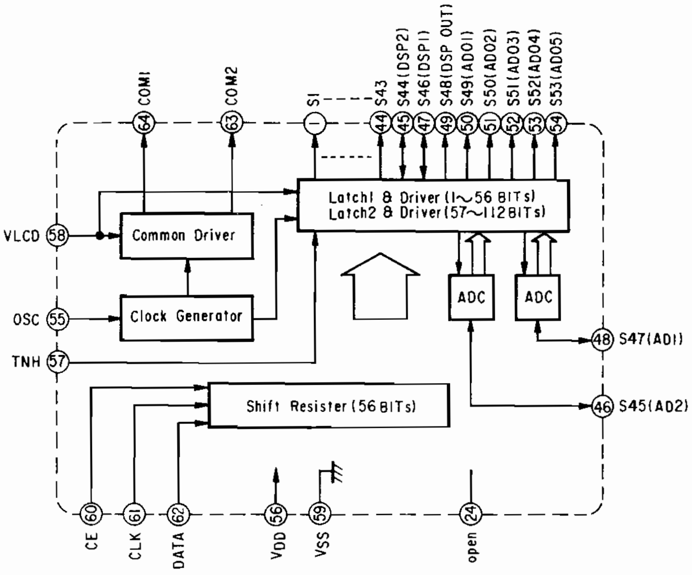
MB3759PF: IC801



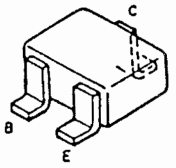

OUTPUT CONTROL
13
RT 6
CT 5
OSC
0.2V
DEAD TIME CONTROL 4
ERROR AMP1
+IN 1
-IN 2
A1
+IN 16
-IN 15
A2
FEED BACK 3
ERROR AMP2
PWM COMPARATOR
D Q
T
Q
PULSE STEERING F/F
8 C1
9 E1
11 C2
10 E2
12 Vcc
REFERENCE REGULATOR
14 VREF
7 GND

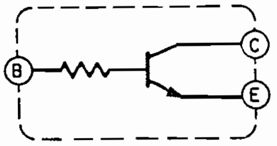
LC7580: IC901


33
32
17
48
16
49
64
1

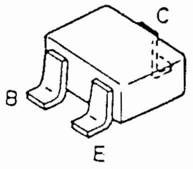

64 COM1
63 COM2
1 S1
44 S43
45 S44(DSP2)
47 S46(DSP1)
49 S48(DSP OUT)
50 S49(AD01)
51 S50(AD02)
52 S51(AD03)
53 S52(AD04)
54 S53(AD05)
Latch1 & Driver (1~56 BITs)
Latch2 & Driver (57~112BITs)
VLCD 58
Common Driver
OSC 55
Clock Generator
TNH 57
ADC
ADC
48 S47(AD1)
Shift Resister (56 BITs)
46 S45(AD2)
60 CE
61 CLK
62 DATA
56 VDD
59 VSS
24 open

UN2217: Q1, 7, 11
DTC114TK: Q221, 222, 224, 653

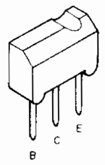




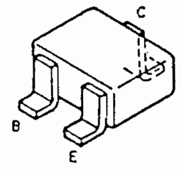
2SD601A: Q2, 103, 104, 107, 306, 816
2SB709A: Q305, 402, 403, 675, 687, 813, 817
2SC2412K: Q672, 683
2SD1328: Q673, 682, 684, 685, 686

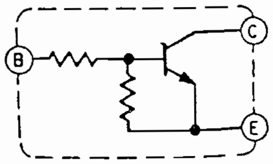


2SD636: Q3, 105, 106
2SD973A: Q4, 6
2SD661: Q601, 602

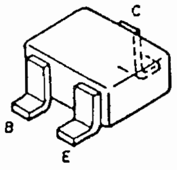


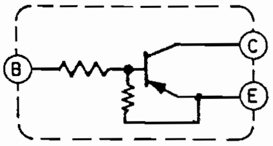
UN2211: Q5
UN2212: Q9, 223, 652, 659, 665, 666, 667, 668, 669, Q670, 674, 691, 807, 808, 809, 814, 815
DTC144W: Q10
DTC124K: Q303



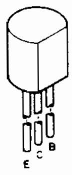


UN2112: Q8, 654, 656, 658, 690, 810
DTA124: Q302, 401, 651

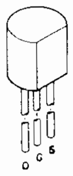




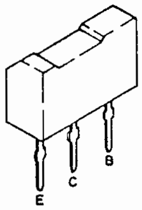
2SC945L: Q101



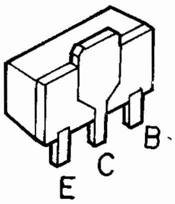
2SK163: Q102



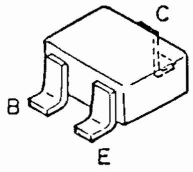
2SD1227: Q201, 203, 205, 207, 663, 803, 805, 811
2SB911M: Q202, 204, 206, 208, 301, 671, 804, 806

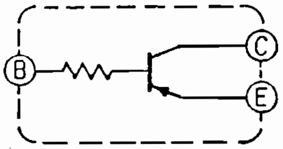


2SD874A: Q209, 211, 213, 215, 217, 219, 650
2SB766A: Q210, 212, 214, 216, 218

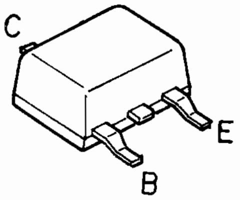


DTA114T: Q225
UN2117: Q681

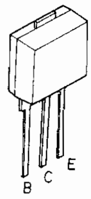




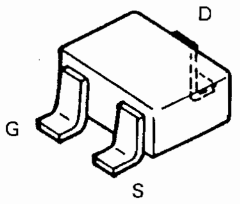
2SD1749: Q649



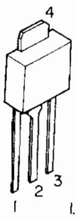
2SD1742: Q657, 812



2SK621: Q676, 677, 678, 679, 680, 688, 689

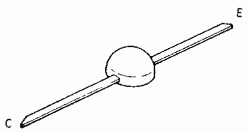


2SA1385L: Q801, 802



1. BASE
2. COLLECTOR
3. EMITTER
4. COLLECTOR(FIN)

PH102: PT660, 662



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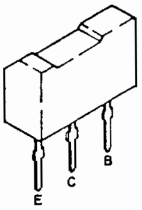
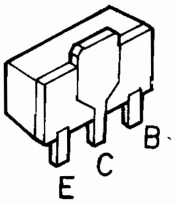
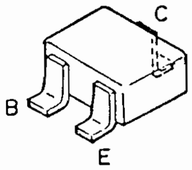
2SD1227: Q201, 203, 205, 207, 663, 803, 805, 811
2SB911M: Q202, 204, 206, 208, 301, 671, 804, 806

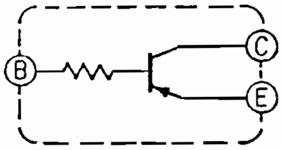


2SD874A: Q209, 211, 213, 215, 217, 219, 650
2SB766A: Q210, 212, 214, 216, 218

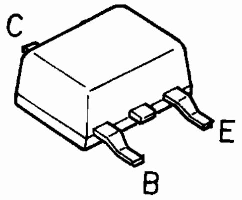


DTA114T: Q225
UN2117: Q681

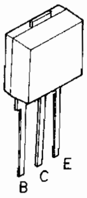




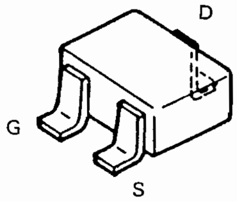
2SD1749: Q649



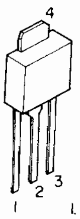
2SD1742: Q657, 812



2SK621: Q676, 677, 678, 679, 680, 688, 689

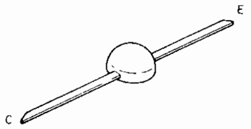


2SA1385L: Q801, 802



1. BASE
2. COLLECTOR
3. EMITTER
4. COLLECTOR(FIN)

PH102: PT660, 662



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